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STRATEGY
for the Implementation of the Addis Ababa Plan of Action for Statistical Development in Africa in the 1990s

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Adopted by the Working Group Meeting on the Implementation of the Addis Ababa Plan of Action for Statistical Development in Africa in the 1990s. Nairobi, Kenya, 16-20 July 1991

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EXECUTIVE SUMMARY

Background

1. The twenty-fifth session of the UN Economic Commission for Africa(UNECA)/sixteenth meeting of African Ministers responsible for economic planning and development held in May 1990 adopted the **Addis Ababa Plan of Action for Statistical Development in Africa in the 1990s**. As recommended in the Plan of Action, a working group meeting was convened by ECA to "further review and elaborate on the principles, objectives and recommendations" of the Plan. The meeting discussed and adopted a strategy document for that purpose. Based on review of past and current situations of statistical development, the document highlights actions that should be taken to give effect to the Plan.

Review of past and current situation

2. The strategy deals first with the history of African statistical development from the time most countries in the region attained their independence. It examines the evolution of African statistical systems and their *raison d'etre* as well as their performance in this initial period.

3. Technical and financial assistance to the region and its impact is also reviewed in order to assess the areas in which it succeeded and those where it failed. In particular a number of major statistical programmes which involved a significant number of African countries are examined. These include the African Census Programme (ACP), the African Household Survey Capability Programme (AHSCP), the Statistical Training Programme for Africa (STPA), the National Accounts Capability Programme (NACP), the World Fertility Survey (WFS), the Demographic and Health Survey (DHS), the Living Standards Measurement Study (LSMS) and the Priority and Integrated Surveys in connection with Social Dimensions of Adjustment (SDA). The AHSCP, STPA and NACP regional components were later included in the Statistical Development Programme for Africa (SDPA) project.

4. The main lesson learnt from this review is that these programmes achieved their immediate objectives but their development aims were only attained in a few cases. There was also inadequate co-ordination of donor assistance. Some possible reasons for this situation are diagnosed.

5. There is evidence to show that a lot of data has been collected by some national statistical services (NSSs) that have neither been analysed nor utilised in any way. This suggests that some NSSs have not taken account of the fact that data which are never used are not worth collecting.

6. The first part of the document also reviews the current state of African statistics at the beginning of this decade and examines *inter alia* the organizational structure, infrastructure and mechanisms for co-ordination among producers and between producers and users. The African experience so far has been that such co-ordination has not generally achieved its purpose.

7. Finally, the first part of the report deals with the major challenges likely to confront African statistical services in the 1990s. These include the dynamics of meeting increasing and new demands for statistical data, priority areas of statistical activity, development of methods and standards, role of women and co-ordination. It is argued in the strategy document that contrary to some prevailing impressions, in general African statistics cannot be said not to have always been demand-driven, though in some cases the demand may have been latent.

8. The second part of this document deals with the strategy itself. It argues that each country should undertake an assessment of its statistical needs with major reviews being conducted periodically say every 5 years. The exercise may take the form of a Programme Review and Strategy Development especially where Needs assessment may be taken as given. Such an undertaking should be authorised at a very high level, preferably at the level of the Minister responsible for statistics. The assessment should look at data needs, priorities and the physical, human and financial resources required to meet such needs. In particular, it should also examine the over-all organizational set-up of the statistical system in the country including that of the National Statistical Service (NSS).

9. Following the endorsement by government of the Needs Assessment/Programme Review and Strategy Development appropriate organizational set up for the Statistical System should be put in place.

10. The acceptance of the assessment report and the appointment of the statistical board/commission/technical advisory committee should be followed immediately by the preparation of statistical development plan covering 5-10 years which should first be discussed with producers and users of statistics in the country. The development of biennial or annual work programme budgets is also urged. This will serve to show governments the links between the products of the statistical office and the resources provided.

11. The need for quick processing of data stems from the requirement of timely data. Data applications and analysis are also a ***sine qua non*** of any effort to improve or strengthen statistical capacity in the region. More effective utilization of data is advocated.

12. Most African countries during the 1990s will require substantial technical and financial assistance. Such technical co-operation has to be re-oriented to ensure that it is actually assisting in capacity building. Effective co-ordination of technical co-operation should exist primarily at the national level, though regional and global fora should also be used in order to avoid duplication and wastage of resources.

13. At the sub-regional and regional level, institutions like Economic Community for West African States (ECOWAS), the Economic Community for Central African States (ECCAS), the East and Southern African Preferential Trade Area (PTA), the Southern African Development and Co-ordination Conference (SADCC), the African Development Bank (ADB) and UNECA are urged to develop or adapt concepts, definitions and classifications more suited to the African region. Statistical training institutions should be strengthened by the provision of suitable premises, adequate staffing and necessary equipment so that they can achieve their objective of making Africa self-reliant in the provision of statistical personnel at all levels. Exchange of teaching staff between statistical training institutions should be encouraged as a way of enriching the teaching programmes at these centres.

14. Facilities for data processing will have to be enhanced. National data bases should be set up to facilitate data retrieval and dissemination. Data applications and analysis will have to be promoted as part of national efforts towards social and economic development. Promotion of user awareness is regarded as one of the key elements in the strategy.

15. Another essential part of the strategy at the national level is the strengthening of managerial capacity at all levels of the statistical system, especially the directorate. This is to be done through careful selection of senior management staff and training.

16. Statistical training centres should also undertake appropriate methodological and substantive research. The role that regional and sub-regional professional statistical associations should play in statistical development is also stressed. In an effort to enhance the role of women in statistical development, a certain percentage of trainee and trainer fellowships should be reserved for qualified women.

17. Advisory services of such as those being provided by UNECA and other UN agencies will need to be continued and further strengthened to cover fields including training, agricultural statistics, population censuses, household surveys, national accounts and other economic statistics, labour statistics, social statistics, data processing and statistical data bases including computer software procurement purpose.

18. The improvement of regional information systems is also urged. The support of countries and donors will be required for the development and maintenance of any regional statistical data base. In addition, regional and sub-regional institutions should prepare or adapt appropriate handbooks and manuals which will assist practising statisticians in their work.

19. At the global level, development of general standards will still be required as well as the preparation of handbooks and manuals. Posts of interregional technical advisers in the United Nations bilateral and other multilateral agencies should be retained since they provide advisory services to the African region and bring lessons learnt in other regions to assist in African statistical development.

20. Finally, in Part II of the strategy document, the case is made for any co-ordination mechanism at the global level also to make due allowance for the exchange of information on technical and financial support to African statistical activities.

Strategy implementation

21. The third part of this document describes some of the steps that should be taken to ensure that the strategy is implemented. Actions are required to be taken at three levels: national, sub-regional, regional and global.

22. Actions to be taken at the national level include the head of the NSS requesting the appropriate government minister to appoint a Needs Assessment Team. The report of the Needs Assessment Team should be submitted within six months of its appointment. On the basis of the report and the Government's reaction, a body to oversee the work of the NSS should be appointed by Government.

23. At the sub-regional or regional level, UNECA and UNDP should convene an inter-agency meeting in which all relevant UN agencies including the ADB and World Bank as well as donor governments or agencies are represented. The inter-agency group should monitor progress made in achieving goals set out in the Addis Ababa Plan of Action and the strategy. Regional and sub-regional and economic and financial institutions should also provide financial assistance.

24. Necessary costed implementation modalities, possibly through an umbrella programme should be put in place.

25. Advice to countries on the procurement of computer software should be provided by UNECA.

26. At the global level, UNECA and UNDP should report periodically on developments to the UN Statistical Commission and to the ACC Sub-Committee on Statistical Activities.

27. In conclusion, all parties in the effort to enhance statistical capacity in Africa are urged to collaborate to help African countries to achieve their objectives.

INTRODUCTION

State of African Statistical Development

28. The state of statistics in Africa has over the past two decades been of considerable concern to several bodies: African Governments, central statistical offices, various primary and secondary users of African data and multilateral and bilateral organizations. Poor management of statistical offices, inadequate funding, lack of timeliness in delivering outputs, unsatisfactory quality of data produced and inability to respond quickly to new data needs are some of the deficiencies that have been identified during the period under review.

29. Some African Governments have responded to these problems by restructuring their national statistical offices and appointing new directors. International organizations have also tried to assist statistical development in the region. For example, the United Nations Food and Agriculture Organisation (FAO) has assisted a number of African countries in data collection, processing and dissemination in the field of agriculture, the International Labour Office (ILO), World Health Organization (WHO), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Children's Fund (UNICEF) have similarly made efforts to improve statistics in their fields of competence. In addition, the United Nations Economic Commission for Africa, the UN Statistical Office, the Statistical Office of the European Communities (EUROSTAT) and the World Bank have also made contributions to try and improve the state of African statistics. Particular mention has to be made of the United Nations Development Programme (UNDP) and the United Nations Population Fund (UNFPA) that have provided considerable financial support to African statistical activities. Bilateral agencies like the United States Agency for International Development (USAID), the Swedish International Development Agency (SIDA), the United Kingdom Overseas Development Administration (UK ODA), the French Co-operation and the Canadian International Development Agency (CIDA) have also made significant financial and technical contribution to African statistical development.

International Statistical Programmes

30 Programmes like the World Fertility Survey, the Demographic and Health Surveys and the Contraceptive Prevalence Survey have all collected high quality statistical data relating to African demography though it is arguable whether they have contributed significantly to capacity-building.

31. African countries themselves had prepared specific programmes which they believed could help to improve the quality of statistical data in the region and provide policy makers and planners with policy relevant information. Four such programmes are the African Census Programme (ACP), the African Household Survey Capability Programme (AHSCP), the National Accounts Capability Programme (NACP) and the Statistical Training Programme for Africa (STPA).

32. The ACP was started in 1971 when African countries complained that some of them had neither the technical nor the financial resources to carry out population censuses. Twenty-two African countries originally enrolled in the programme which was funded by the UNFPA. Many of these countries were undertaking a population census for the first time.

33. The second programme was the AHSCP which was conceived in 1973 by the 8th session of the Conference of African Statisticians as a sequel and a supplement to the ACP. It was meant to assist African countries to develop the capacity for carrying out country-specific multi-subject surveys. A number of African countries have participated in the AHSCP which is still on-going. In 1979 the concept of the AHSCP was extended to cover other regions as well and it became the National Household Survey Capability Programme (NHSCP).

34. The two earlier initiatives dealt with censuses and surveys. In 1978, African countries noted that economic statistics were still lagging behind demographic and social statistics and therefore proposed the NACP which was meant to assist African countries in improving their basic economic statistics and national accounts. However, resources provided under this programme were rather limited and therefore there was limited impact in the development of economic statistics in the region.

35. The Statistical Training Programme for Africa (STPA) was also an African initiative. Established in 1978 by UNECA with funding by UNDP it aimed at reducing the reliance of the NSSs on expatriate professional staff as well as at producing middle and intermediate level statistical personnel to assist in statistical development in the region.

UNECA resolution on data analysis and applications

36. No account of African initiatives taken in the statistical field can be complete without reference to the resolution adopted by the Conference of African Ministers of Planning in 1983 on data analysis and applications. After exhaustive discussions by the Joint Conference of African Planners, Statisticians and Demographers in 1982, on the state of African statistics, including the question of taking into account users demand for data, it was

concluded that no significant improvement could be achieved without progress in data analysis and applications. The resolution was intended *inter alia* to encourage the wider application of statistical data by policy-makers, planners, administrators and researchers. It was considered that when users of data acquire some of the analytical tools that will allow them to interpret data, this will in turn stimulate demand for more data and make the national statistical system more responsive to data needs.

The Addis Ababa Plan of Action

37. In spite of all these initiatives to improve the coverage, timeliness and quality of African statistical data, very little progress was discernible in some countries due mainly to inadequate funding of statistical activities and poor leadership in some national statistical services. UNECA undertook missions to 32 African countries to assess their statistical capacities. In response to the general picture of the state of African statistical services that emerged from these assessments, the Joint Conference of African Planners, Statisticians and Demographers at its 6th session convened in Addis Ababa in January 1990 recommended the adoption of the Addis Ababa Plan of Action on African statistical development. The Plan was formally adopted by the UNECA Conference of Ministers in May 1990.

This plan had as its objectives;

" i. To achieve national self-sufficiency in statistical production, including the creation of a comprehensive national statistical data base by the end of the century.

ii. To improve the reliability and relevance of data produced in African countries.

iii. To undertake production of data required for formulating, monitoring and evaluating programmes designed to restructure and transform African economies.

iv. To improve the timeliness in the production and dissemination of statistical information.

v. To increase awareness of the importance of statistical information among users.

vi. To strengthen and sustain statistical training programmes at various levels and institutions.

vii. To promote contact and dialogue among African Statisticians.

viii. To encourage improvement in the organizational set-up of the National Statistical Service (NSS) and assure their autonomy.

ix. To improve co-ordination of all statistical development programmes at both national and international levels."

38. The Plan of Action recommends steps which African Governments should take to achieve these objectives. These include according higher priority to statistical activity and statistics, adequate funding, restructuring of national statistical services, where necessary, and the preparation of statistical development programmes and work programme budgets. In the Plan of Action, UNECA was requested to convene a Working Group meeting to further review and elaborate on the principles objectives and recommendations of the Plan. The detailed plan of Action is given as an Annex.

Scope of this document

39. After the adoption of the Addis Ababa Plan of Action, the Economic Commission for Africa appointed a consultant, to prepare a draft strategy paper on Statistical Development in Africa in the 1990s. Before preparing the report, the consultant undertook missions to the headquarters of UNECA in Addis Ababa, United Nations Food and Agriculture Organization's (FAO) in Rome, International Labour Organization (ILO) in Geneva, World Health Organization (WHO) in Geneva, Statistics Sweden and Swedish International Development Agency (SIDA) in Stockholm, the World Bank in Washington, the United Nations Statistical Office (UNSO), United Nations Population Fund (UNFPA), United Nations Development Programme (UNDP) and United Nations Children's Fund (UNICEF), all in New York, the Statistical Office of the European Economic Communities (EUROSTAT), Luxembourg, and the African Development Bank (ADB), Abidjan, Côte d'Ivoire. The consultant had the benefit of written work being done by some of these organizations.

40. The Consultant's report was discussed at a Working Group meeting in Nairobi, Kenya from 16 to 20 July 1991 and amendments were made. The revised document is presented in three parts.

41. Before outlining the main elements of the proposed strategy for the development or improvement of statistics in Africa in the 1990s, a brief account of the history of African statistical development is given with emphasis on a critical review of the problems encountered. This approach is used because it is believed that the proposed strategy will be better understood against the background of what has gone on before. This constitutes part of Part I of this strategy document. Part I also contains a review of technical and financial assistance to Africa from the time most African countries became independent and includes an account of the

major challenges facing African countries in the statistical field in the 1990s.

42. Part II of the document deals with the strategy itself and clearly states what actions should be taken at the national level to ensure that a good national statistical system is set in place and that the outputs of the system are used. It also indicates what African countries should do if technical cooperation is to be made more useful to them. In addition, actions to be taken at sub-regional and regional levels are discussed. Finally, the role that institutions at the global level (bilateral and multilateral organisations) can continue to play in promoting statistical development within the African region is addressed.

43. In Part III of the document, modalities for implementing the strategy are discussed. It has been pointed out that one reason why many good African plans do not get implemented is that no proper and realistic implementation strategy is evolved as part of the plan. In this document, therefore, concrete proposals are made to guide all principal actors (African Governments, bilateral and multilateral agencies as well as international organizations).

44. Finally, this strategy document is addressed to all member States of the United Nations Economic Commission for Africa and not only to those who are usually described as belonging to sub-Saharan Africa. It is also addressed to bilateral and multilateral agencies as well as international organizations.

PART I

REVIEW OF AFRICAN STATISTICAL DEVELOPMENT (1960-1990)

1. HISTORY OF AFRICAN STATISTICAL DEVELOPMENT 1960-1989

Statistical activities before independence

45. Statistical units were introduced into colonial Africa during the last years of the 1940s. In territories under British administration, such units were established usually as the "Office of the Government Statistician" under the Treasury. Thus their functions were largely determined by the needs of the Treasury.

46. Belgium similarly set up a statistical unit in Belgian Congo (now Republic of Zaire) and Rwanda - Urundi (now the separate states of Rwanda and Burundi). The law establishing the unit also stated the functions of the office which were mainly to produce statistics for the administration in Belgian Congo and Rwanda - Urundi.

47. France similarly had in the 1950s established a unit in the headquarters of French West Africa which covered countries of West Africa under its rule. The unit had similar functions to those established by the British and Belgians.

48. It is not known when Spain and Portugal created statistical units in their colonies but such offices did exist before those colonies became independent.

49. It is also known that countries like Egypt have had a long tradition of statistics and the teaching of statistics was taking place in at least one Egyptian university before the British, French, Belgians, Spanish and Portuguese established statistical units in their colonies.

50. However, statistical activities predate the formal establishment of statistical units. For example, population censuses in Africa were carried out in some African countries from 1891 at decennial intervals until the second World War interrupted the series in 1941.

Post independence statistical administration

51. After independence, African countries inherited the statistical offices that had been set up by the colonial powers, some of them without trying to restructure the system to bring them more in line with the requirements of an independent state. However, a number of them did. Ghana, for example, in 1960,

restructured the office of the Government Statistician and renamed it the Central Bureau of Statistics to reflect the changed nature of its functions. The concept of a centralised statistical system was adopted by most statistical offices since it was argued that it was more cost-effective and technically expedient than a decentralised statistical system.

52. Typically, the Central Bureau of Statistics (CBS)[1] remained with the Ministry of Finance. It was later when Ministries of Planning were created in Africa that some CBSs were transferred to those Ministries. In some countries, this change did not result in a change in Ministers since the same Minister of Finance was also responsible for Planning.

53. However, in other countries, there was a clear separation of functions and Ministers between the Ministries of Finance and Planning but this did not create too many problems until late in the 1970s when the economic conditions in many African countries began to deteriorate. The effect of the separation of the national statistical services from the Ministry of Finance on the budgets of the former is difficult to gauge. It is possible that given the way most African Ministries of Finance function that the position would not have been any different had the statistical services remained with the Ministry of Finance.

Subject Coverage

54. As already stated, statistical offices were originally established to assist the Ministry of Finance and thus it is not surprising that initially there was emphasis on economic statistics: trade, consumer price index, household budget survey, agriculture, industry and labour. Demographic and social statistics were not given much attention in most of the countries at this initial stage of African statistical development. Some countries did, however, carry out population censuses.

55. Trade statistics comprised data on imports and exports with information collected mainly at harbours, airports and post offices. Trade data was also collected at land borders but it was generally known that because of the nature of these borders a lot of unrecorded trade could take place between neighbouring countries. Monthly data were published in condensed form showing imports, exports and balance of trade. The more detailed trade data were produced on an annual basis.

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[1] The terms Central Statistical Bureau, Central Statistical Office, National Statistical Service are being used interchangeably. The National System, however, refers to all producers of statistics in the public sector.

56. Agricultural statistics was one of the subjects to be given early priority. For example, the following countries participated in the 1960 Census of Agriculture programme.

North Africa : Egypt, Libya, Morocco and Tunisia
West Africa : Benin, Ghana, Guinea, Guinea-Bissau, Niger, Nigeria and Togo
Central Africa : Angola, Central African Republic, Congo, Gabon
East and Southern Africa: Botswana, Lesotho, Madagascar, Malawi, Namibia, Seychelles, Tanzania, Uganda, and Zimbabwe

Not all these countries were independent at the time of their participation in the 1960 round of agricultural censuses. Some of them like Namibia, (formerly South-West Africa) and Zimbabwe (formerly Southern Rhodesia) were not independent at the time of the 1960 census. This scope of the censuses followed basically the recommendations of FAO as outlined below. The figures shown in parenthesis are the number of African countries that covered the topic in one form or another in the 1970 census of agriculture:

1. Number of agricultural holdings and their principal characteristics: age, main occupation and legal status of holder, size of holding, fragmentation of holdings operated and system of tenure under which the holder operated the holdings (22).

2. The utilization of land in the holding (12)

3. Area and production of each crop and an inventory of the number of fruit trees and other permanent crops on the holding (22).

4. An inventory of livestock and poultry on the holding (22).

5. The number and characteristics of persons employed on the holdings (20).

6. The number and characteristics of persons living on the holdings (21).

7. An inventory of agricultural machinery, the kind of power used on holdings and means used to transport agricultural products from the holdings (21).

8. Area of land provided with irrigation facilities, area of land irrigated and source of water used for irrigation

purposes and area of land provided with drainage facilities (7).

9. The use of fertilizers and soil dressings on holdings (17).

10. The production of wood and fishery products on holdings

An additional topic was added to the 1970 and subsequent agricultural censuses programme, namely

11. Association of agriculture with other industries (1).

57. As already indicated the numbers in parenthesis indicate how many African countries included the topic in some form in its census inquiry in 1970. The distribution of topics among countries was similar in the 1980 and 1990 round of censuses (for the countries that have already taken or have finalised plans to undertake an agricultural census). In 1970 topics 8, 10 and 11 were unpopular among African countries, largely because of the limited relevance of the topic at the time.

58. African countries did not generally undertake agricultural censuses in the technical sense of the word "census". They could not afford the high cost of such an operation and did not have the necessary human resources. Instead, they used a sample approach ("sample census"), except in Swaziland where all holdings in the Swazi Nation Land and those belonging to individual Tenure Farms were completely enumerated.

59. As implied in the preceding discussion, the holding is the unit of inquiry and enumeration in an agricultural census. However, in the 1970s some countries decided that information on crop acreage and production as well as livestock and poultry could be obtained relatively cheaply through the mechanism of a household survey. Agricultural surveys were, therefore, carried out in some African countries in which holders were identified through households. The Kenya Integrated Household Survey and its sequel as well as the Mali Household Survey programme are good examples of the use of the household as a mechanism through which holders and holdings were identified and area cultivated and yield estimates obtained.

60. From the very beginning of the implementation of agricultural statistics in Africa, the collection of price data had been one of the priority activities. A few countries had in addition compiled quantity, price and value indices.

61. The above account should, however, not give the impression that agricultural statistics in Africa is without problems. Some

of these problems are discussed in general and in greater detail in section 3.

62. After the severe drought in Ethiopia in 1974 and the resulting famine, the Government, with the assistance of ODA, USAID, SIDA and later FAO and UNICEF, put in place an Early Warning System (EWS), which would alert Governments and donors to an impending disaster. The EWS (previously known as Food and Surveillance) is an integral part of a food supply and food security system. It makes use, for example, of information on climatic variations, vegetation cover and nutritional status to provide early signals of a serious shortage in food supply. Soon after its inception in Ethiopia, other countries, especially in the drought prone areas of the Sahel established similar systems.

63. Such systems have not normally been operated by the national statistical service (NSS) but in some countries where the NSS is also responsible for agricultural statistics it has played a key role in this monitoring mechanism.

64. The next type of statistics covered is labour statistics. These have been derived from many sources including population and housing censuses, demographic and social surveys, employment and unemployment reports and labour force surveys. The last mentioned became popular in Africa mainly in the 1980s when there was an increased attention to manpower issues. Prior to that, population censuses were the most prolific source of employment and unemployment data in Africa even though a few countries in Eastern and Southern Africa did not include economic questions in their population censuses. Now the position has changed. Economic questions such as activity status, occupation, industry and status in employment are being routinely included in population censuses.

65. Reports from formal sector establishments on number and levels of persons employed by sex, and, sometimes, also on major occupation groups were also collected by some African statistical offices. While, at the time of independence, the coverage of such establishments was quite good, by the mid-1970s it had become so poor as to render the data not very useful in understanding the employment situation. In addition, these establishment surveys typically covered those above a certain size, say 5, 10 or even 20. Thus, establishments below such cut-off points were not covered. Data on employment in the significant informal sector were not usually collected, except in a few special surveys limited to a few urban centres. Thus, statistical data on the participation of both men and women in the informal sector were not generally available.

66. ILO is the UN agency with primary responsibility for labour statistics. Its Convention 160, officially cited as the Labour Statistics Convention, was adopted in 1985 by the International Labour Conference and defined the scope of labour statistics to be

covered by each member. The Article of this convention reads as follows:

> "Each Member which ratifies this convention undertakes that it will regularly collect, compile and publish labour statistics, which shall be progressively expanded in accordance with its resources to cover the following subjects:
>
> a. economically active population, employment, where relevant unemployment, and where possible visible underemployment;
> b. structure and distribution of the economically active population, for detailed analysis and to serve as benchmark data;
> c. average earnings and hours of work (hours actually worked or hours paid for) and, where appropriate, time rates of wages and normal hours of work;
> d. age structure and distribution;
> e. labour cost;
> f. consumer price indices;
> g. household expenditure or, where appropriate, family expenditure and where possible, household income or, where appropriate, family income;
> h. occupation injuries and, as far as possible, occupational diseases; and
> i. industrial disputes."

67. Most African statistical offices publish data on (a), (b) and, to some extent, (c). Statistical data are also published on (f) and (g), though in some countries the quality of the information is so poor as to be useless. There is also the problem of the long delay between collection and publication of data. This is, however, not a problem confined to the field of labour statistics.

68. As already mentioned, at the time of independence very few countries paid any attention to demographic and social statistics. In English-speaking African countries, there had been a relatively long tradition of population census-taking dating back to 1891 but almost all those carried out before independence had been undertaken by administrators who had been more interested in the counting of heads. In French-speaking African countries, population related surveys had been carried out by French institutions like the Office *de la recherche scientifique des Territoires d'Outre-Mer* (ORSTOM), even before independence.

69. After independence, African countries became interested in the size, structure and characteristics of their population. Thus, population censuses and surveys were given prominence in the statistical agenda of countries. While English-speaking countries

conducted both censuses and surveys, French-speaking countries concentrated on surveys, because they regarded censuses as expensive and unnecessary. This dividing line between the two language groups was emphasised during the first ECA sponsored African Population seminar convened in Cairo in 1962. By 1970, however, the French-speaking African countries had changed their view and accepted a population census as necessary for obtaining an accurate frame for surveys as well as for obtaining statistics on small areas. Thus a number of them participated in the African Census Programme which produced results which showed that because their previous estimates had been based on results of surveys which had used defective frames, their population sizes had tended to be understated.

70. The 1970s were, therefore, the active period for the development of demographic statistics in Africa. Units or sections were set up in offices to deal with the population census and, afterwards, to process, publish and disseminate demographic statistics.

71. There was no parallel development in the field of registration of births and deaths. Although experiments such as sample registration and the dual record system were carried out in selected districts there were problems of applying the results of the experiments to the rest of the country. Thus only a few island countries such as Mauritius had a registration system which could be regarded as complete. Because the civil registration system could not be used to provide, for example, plausible infant and under-5 mortality rates, the pressure to undertake surveys to obtain such data increased. This led to a large number of surveys in the 1960-1989 period. Ufortunately, the results of many of these surveys were never published.

72. The availability of funds for population related surveys mainly, from UNFPA and USAID led to demographic (and social) statistical activities being given strong emphasis in the work of NSSs. In certain cases this resulted in the neglect of economic statistics.

73. Social statistics based on administrative records (schools and hospitals) have also existed from pre-independence days. School statistics in the 1960s were fairly reliable. All educational institutions were either government-owned, government-assisted or closely regulated by government. When many countries expanded their educational programmes, especially, at the first level and when many private schools were established, the work of compiling reliable statistics on school enrolment by level, age and sex became more difficult. For some countries, therefore, published enrolment figures for the first and second levels do not accurately reflect the true situation, since corresponding figures from private institutions are incomplete. However, UNESCO which is the

United Nations agency responsible for education, science and culture is endeavouring to assist countries to improve statistics in the above mentioned areas through a major technical assistance project for "strengthening national statistical information systems for planning and management of education in Sub-Saharan African countries", within the framework of the Donors to African Education (DAE) Working Group on Education Statistics. This project was to be launched in early September 1991, with initial funding from the Swedish International Development Authority (SIDA).

74. Health statistics have also been compiled and published by African countries, mainly by their ministries of health. These have related to number of in-patients and out-patients, hospital beds, immunizations and vaccinations, hospital personnel and causes of death. Occasionally health and/or nutrition surveys had been carried out to measure the extent of malnutrition, incidence of malaria and morbidity. The statistics based on hospital records are usually published in the annual report of the Ministry and in most countries does not receive inputs from the NSS. While a few countries still publish their results on time, many countries have long delays and some countries have not published any statistics for several years. This has again increased the pressure for health surveys to fill in the vacuum.

75. Apart from the untimeliness of the health reports, there are serious questions about the quality of some of the data. Medical certification of the cause of death does not necessarily imply an accurate report. In the past, when both the immediate and underlying causes of death had to be reported in some countries, a verifier (a senior medical officer) had to correct the interchange of responses. However, a much larger problem was the fact that during the period under review, 1960-1989, most causes of deaths could not be medically certified. WHO experimented with lay reporting of the causes of death but this approach was never routinely applied in any African country.

76. The statistical requirements of the "Health for all by the year 2000" has increased pressure on health statistical systems to improve their epidemiological surveillance and to monitor changes in key health indicators. WHO has prepared six manuals for health workers on how to conduct community health surveys.

77. In the field of industrial statistics, two approaches have been used to obtain the relevant data: establishment surveys and censuses. Typically, questionnaires are designed and distributed to establishments to be completed on a quarterly or annual basis. The establishments which are selected for this mail inquiry are the large ones, large being defined in different ways by different countries. Typically, national statistical services have used 5, 10 or 20 paid employees as the cut-off point. The main problem faced by NSSs is the inadequate register of establishments from

which the establishments are selected. Such registers are in some countries not regularly updated. Even where they are updated, the method of updating is unsatisfactory and leaves non-existent establishments still on the list while new ones are omitted.

78. Towards the closing years of the 1980s, a shift started to be made from establishment to enterprise surveys. No detailed information is available on the number of countries that still collect data from establishments and those that obtain them from enterprises.

79. With respect to industrial censuses, very few African countries have participated in such inquiries due, mainly, to their cost. Such censuses have tended to be substituted by sample surveys where the smaller and sometimes even the medium sized enterprises have been excluded. This, in effect, implies that all informal sector enterprises have been automatically excluded from such inquiries. Thus reliable information on African industries is generally unavailable. The very few countries that have conducted censuses and surveys have also had unacceptable delays in processing and publishing the results.

80. The last major area that will be reviewed in this section is price statistics. Many countries since independence have produced price statistics in only the capital city/town. A few have covered selected urban areas in addition but; a substantial number cover both selected urban and rural areas. No sample procedures appeared to have been used. The Laspeyres Index which weights prices (quantities) by base period quantities (prices), appears to be the preferred method for calculating price indexes.

81. The main problem encountered, apart from data collection, is the political sensitivity of one important price statistics output, the consumer price index. Some governments have directly or indirectly tried to influence reporting of the consumer price index.

Staffing and manpower development

82. Not enough information is available about the organizational structure and size of national statistical services at the time of independence. From the little that is known, it is clear that NSSs had a significant number of expatriates among the professionals. These expatriate officers were generally in charge of the management of the offices and their sections. The Portuguese-speaking African countries became independent after bitter guerilla wars and all the expatriate (Portuguese) staff left when the countries achieved independence. At least two of these five Portuguese-speaking African countries had no qualified person to take over the direction of the statistical office at the time of independence. For at least one of them, the most senior African

statistical clerk found himself in charge of a statistical office with neither the necessary expertise nor experience to manage such an important branch of government activity.

83. For the English- and French-speaking countries, most of the expatriates were phased out soon after independence though in some countries some of them remained under technical co-operation agreements. For the African statisticians who worked in these offices, there was a marked difference between those in French-and English-speaking countries in the region. The French-speaking African statisticians, as is the case even today, received their education in statistical institutes and were thus well-trained in both theoretical and applied statistics. The statisticians in English-speaking countries had different backgrounds: graduates in economics, mathematics, sociology, geography and other social science subjects. All these should have taken at least one course in statistics. In fact, it was an unstated policy in some of these countries not to recruit persons who had studied only statistics unless such studies had also covered economics. The other social science subjects were accepted later as possible entry qualifications after initial strong objections. In some English-speaking countries, candidates who were associates/members of the Institute of Statistics of the United Kingdom were also accepted as professional statisticians.

84. Professional level training was initially given in overseas institutions and universities such as *l'Ecole d'application* of INSEE in Paris and the London School of Economics. Later, institutions within the region provided most of the training required for recruitment of a professional statistician.

85. During the initial phase of the period under review, there was a marked scarcity of potential candidates with a satisfactory background in mathematics. This lack of well-qualified statisticians created enormous problems when African countries wanted to Africanize their statistical services.

86. The following professional level centres were created during the period:

English-speaking

a. Department of Statistics, University of Botswana, Gaborone, Botswana;
b. Department of Statistics, University of Ghana, Legon, Ghana;
c. Department of Statistics, University of Ibadan, Ibadan, Nigeria;
d. Institute of Statistics and Applied Economics, (ISAE) Makerere University, Kampala, Uganda;
e. National University of Lesotho (NUL), Roma, Lesotho;

f. Regional Institute for Population Studies (RIPS), Legon, Ghana.

French-speaking

g. Centre européen de formation des statisticiens-économistes des pays en voie de développement (CESD-Paris);
h. Collège statistique (CS), Dakar, Senegal;
i. Ecole nationale supérieure de statistique et d'économie appliquée (ENSEA), Abidjan, Côte d'Ivoire
j. Institut africain et mauricien de statistique et d'économie appliquée (IAMSEA), Kigali, Rwanda;
k. Institut de formation et recherche démographiques (IFORD), Yaoundé, Cameroon;
l. Institut national de planification et de statistique (INPS), Algiers, Algeria;
m. Institut national de statistique et d'économie appliquée (INSEA), Rabat, Morocco;
n. Institut sous-régional de statistique et d'économie appliquée (ISSEA), Yaoundé, Cameroon;

87. The middle-level staff were initially trained on the job but from 1960 onward middle-level courses for both English- and French-speaking countries were established by the United Nations in Morocco, Ghana, Ethiopia and Cameroon. By 1989 middle-level courses were being organized in the following centers offering regional services:

English-speaking

a. Department of Statistics, University of Botswana, Gaborone, Botswana;
b. Eastern Africa Statistical Training Centre (EASTC), Dar-es-Salaam, United Republic of Tanzania
c. Institute of Statistical, Social and Economic Research(ISSER)University of Ghana, Legon, Ghana
d. Department of Statistics, University of Ibadan, Ibadan, Nigeria,[2]

French-speaking

e. Ecole nationale supérieure de statistique et d'économie appliquée (ENSEA), Abidjan, Cote d'Ivoire
f. Institut sous-régional de statistique et d'économie appliquée (ISSEA), Yaoundé, Cameroon

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[2] The Professional level diploma awarded by the University of Ibadan is superior to the normal middle-level diploma but is not equivalent to a first degree in statistics.

88. All these centres participate in the statistical training component of the Statistical Development Programme for Africa (SDPA), called the Statistical Training Programme for Africa (STPA).

89. As previously explained, there were generally no demographic and social statistics divisions/sections in NSSs at the time of independence because the Treasury or its equivalent had not yet grasped the importance of that type of statistics. Typically, therefore, national statistical services were structured along the lines of different units in economic statistics such as trade, labour and economic surveys.

90. It was after independence when some countries reviewed the structure of their statistical services that divisions and sections were created and demographic and social statistics became recognized as important divisions in the revised structure. Up to 1970 many of the medium-sized countries did not foresee the need for more than three professionals in that division.

Timeliness and quality of data

91. No review of the first 30 years of post-independence statistical development can be complete without reference to the timeliness and quality of the data that were being produced. At the time of independence, most publications were based on manual tabulations though a few were mechanically processed on the first generation computers which were more like sorting machines. The experience of this early stage was that publications which depended solely on manual processing were released more timely than those that depended either wholly or partly on computer processing. Some of the surveys which were carried out in the early days of statistical development used mainly manual processing and so the results were released quite early. When later computer processing was applied to these surveys, the results were either unduly delayed or in many cases the publications were never issued. This is due to a number of factors such as equipment failure and inadequate training of computer staff (systems analysts, programmers, operators, data entry clerks etc.) In any comparison between manual and computer processing at that time, it should, however, be noted that the tabulation programmes used in computer processing were more extensive than those used in manual processing.

92. Apart from the results of population censuses, there was a general deterioration in the timeliness of statistical publications in the 1980s. The reasons differed from country to country. In many cases, the slow down of the economy led to inadequate resources being channelled to the statistical offices. In some countries, it was due to inadequate access to a computer or frequent equipment breakdowns, in others it was due to lack of

proper management of the programmes or offices. The outcome of all these factors is that a large number of African countries have not issued, for example, their annual yearbooks of trade statistics since 1983. Users of trade data have been forced to use partner trade data to obtain information on quantities and values of goods imported or exported. A similarly dismal picture can be portrayed in other areas of statistics.

93. In spite of the general problems outlined above, countries such as Algeria, Botswana, Lesotho, Morocco and Zimbabwe have been able to release their statistical data within a reasonable time frame. Other countries such as Kenya, have also had data available but, regrettably, not in published form.

94. The issue of timeliness cannot be divorced from that of quality. In the past some statistical offices had argued that delays in publishing statistical reports had been due to the need to ensure a high quality in the data. There is, however, no empirical evidence to support that view. It appears that in the initial stages of manual processing, errors in the final product were due mainly to enumerator and respondent effects. Manual processing, while introducing some errors, was, by no means, the major source of error. Data in the 1960s were by and large usable. Computer processing did not make the errors worse, although data entry may have introduced errors. On the contrary, because it introduced a wide range of error detection and correction, it made data more usable.

95. Response rates in surveys in Africa have always been very high. However, as far as mail questionnaires are concerned, response to inquires in respect of establishments and enterprises dropped from around 80 per cent at the beginning of the period under review to a low rate of less than 50 per cent in some countries. This can be explained partly by the large increase in enterprises/establishment as well as the rather different attitude of institutions in the public and private sector to such inquires.

96. Low response rates as well as delays in submitting completed questionnaires affect the timeliness and quality of data. In some countries, political interference led to delays in releasing data and also to falsification of results.

97. Nevertheless, African statistical data still contain serious errors. For example, in the population censuses, age has been identified as the most unreliable item and inspite of attempts since 1960 to improve age data by means of historical and local events calendars. Trade data are also inconsistent with data published by partner countries. Only recently are attempts being made in some countries to reconcile these differences and thus improve the quality of the data.

98. National accounts data have serious deficiencies and there are many planners and researchers in countries who disregard the estimates published by the NSSs or central banks in this area and use those provided by external multilateral institutions.

99. Modern methods of quality control, such as those used in industry, were not used in the production of statistics. This has resulted in a rather low level of confidence in the reliability which policy-makers and the general public place in statistics.

2. REVIEW OF TECHNICAL AND FINANCIAL ASSISTANCE IN AFRICA

General

100. Recent assessments of 30 years of technical assistance in Africa describe its impact as a highly unsatisfactory one.[3] Although this verdict is pronounced on technical co-operation in general and not statistics in particular, some important elements of the criticisms apply to statistics. This pertains, especially, to the aspect of capacity-building and sustainability of programmes started with donor support. While immediate objectives were often achieved, the same cannot be said of long-term development goals.

101. In order to reach a conclusion on the overall impact of technical co-operation on the statistical development of the region it is important to examine in some depth the areas of statistics in which technical co-operation has been prominent. Some of the evidence being examined is to be found in evaluation and mission reports but there is also a lot of anecdotal evidence which cannot be dismissed.

102. As shown in Table 1, which is a statement of expenditures for projects executed by the United Nations Department for Technical Co-operation for Development (UNDTCD), approximately 46 million US dollars were spent on technical co-operation in Africa in the field of statistics from 1983 to 1989. The amount rose from US $4.9 million in 1983 to US $ 9.5 million in 1989.

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[3] See report on Technical Assistance in Africa, United Nations Inter-Agency Task Force on the United Nations Programme of Action for African Economic Recovery and Development (Unpublished, ECA 1989)

Table 1: UNDTCD expenditure in the area of statistics in Africa*
by subject
(in thousands of US dollars)

Subject area	1983	1984	1985	1986	1987	1988	1989	Total
Multi-sector statistics	1006	826	384	439	544	900	978	5077
National accounts, finance and price statistics	117	269	287	491	476	702	469	2811
External trade, transport and energy statistics	-	-	-	-	-	-	-	-
Other economic statistic	879	941	1252	1194	964	1097	764	7091
Demographic and social statistics	783	486	475	506	404	609	644	3907
Population censuses	1814	1695	1685	2085	3548	5401	5726	21954
Census and survey cartography	-	-	38	20	21	23	127	229
Sampling and surveys	207	247	456	536	520	553	446	2965
Data processing	108	384	339	372	142	55	331	1728
Other	-	-	-	-	-	-	-	-
Total, statistics	4915	4848	4917	5643	6619	9340	9485	45766

*In accordance with the classification adopted by UNDTCD, the following countries are not included: Algeria, Djibouti, Egypt, Libya, Morocco, Sudan and Tunisia.

This does not, however, represent total UN assistance to Africa since it excludes projects executed by FAO, ILO, WHO, UNICEF and other UN agencies as well as projects executed directly by UNDP, UNFPA or the countries themselves. Other multilateral assistance is also available from the World Bank and the European Economic Community (EEC). Although no precise figures are available, bilateral assistance to African countries in statistics is very substantial. The main bilateral donors are France, SIDA, UK ODA and USAID.

103. The UNDTCD's statement of expenditures (Table 1) presents a detailed picture of multilateral assistance to Africa. Table 2 presents the same expenditure data, cross-classified by year and object of expenditure. Table 2 shows that 48.4 percent of total expenditure from 1983 to 1989 was spent on personnel whereas only 13.0 percent was used for training. This apparent imbalance between personnel and training has been identified by many critics as one of the inherent weaknesses of technical assistance under the UN system.

Table 2: UNDTCD expenditure in the area of statistics in Africa*
by component
(in thousands of US dollars)

Year	Personnel	Training	Equipment	Other	Total
1983	2854	432	1334	295	4915
1984	2620	644	1283	301	4848
1985	2524	803	1337	252	4916
1986	2626	867	1768	382	5643
1987	3501	785	1648	685	6619
1988	4090	1054	3110	1086	9340
1989	3926	1360	3208	989	9483
Total	22141	5945	13688	3990	45764

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* In accordance with the classification adopted by UNDTCD, the following countries are not included: Algeria, Djibouti, Egypt, Libya, Morocco, Sudan and Tunisia.

In response, those in charge of technical co-operation have argued that the salaries of personnel who are recruited to train local staff in countries are logically included in the expenditures on personnel. In addition, project personnel are generally expected to train counterpart staff on the project and this is not reflected under training. The Training component in Table 2 is thus restricted to fellowships, workshops and seminars and does not reflect all training activities undertaken in UN projects.

104. In spite of this explanation, many African countries insist that in the past expatriate experts have been foisted on them as a condition for project approval. Examples have been cited in the areas of civil registration and population censuses. If this was the case, it can now be categorically stated that towards the closing years of the 1980s the multilateral donors moved towards not only accepting the principle of local experts but also that of national execution of projects. Thus, the criticism of assistance being tied to acceptance of an expatriate Chief Technical Adviser is becoming less valid.

105. In the above paragraphs, consideration has been given largely to technical assistance projects executed by UNDTCD. This is not because it is the most active actor in the statistics field but because at the time of preparing this document it was the only organization that had provided data for a long enough period in sufficient detail to allow meaningful analysis to be undertaken.

106. A further examination of Table 1 highlights the main areas of statistical assistance. For the period 1983 - 1989, a ranking of the areas by the amount of assistance leads to the following order:

1.	Population censuses	48.0%
2.	Other economic statistics	15.5%
3.	Multi-sector statistics	11.1%
4.	Demographic and Social statistics	8.5%
5.	Sampling and surveys	6.5%
6.	National accounts, finance and price statistics	6.1%
7.	Data processing	3.8%
8.	Census and survey cartography	0.5%
9.	External trade, transport and energy statistics.	-

107. Most of the assistance during this period was for the execution of population censuses funded by UNFPA. Population censuses, together with demographic statistics, account for 56.5 per cent of UNDTCD's expenditure on technical co-operation for the period 1983 - 1989. Economic statistics account for only 21.6 per cent of the assistance while multi-sector statistics which generally includes projects on strengthening of statistical offices cover 11.09 per cent. Total UNDTCD expenditure by source of funds is as shown in Table 3 below.

108. Apart from population projects funded by UNFPA, most of the remaining activities of UNDTCD have been funded by UNDP.

109. The technical assistance provided by UNDP through UNDTCD has been mainly at country level. In addition, UNDP has also been providing assistance through other UN organs and sister organizations (specialized agencies, regional commissions notably UNECA, UNECE and the World Bank), the countries and UNDP itself.

110 In addition to country level direct assistance, UNDP has been funding a number of regional and sub-regional programmes some of which also provide support to the countries. A few of which programmes have been mentioned earlier and are reviewed below. Others include Development of Transport Data Base in Sub-Saharan Africa, Information network for the Exchange of Economic and Trade Data for the Economic Community of Central African States, Computerization of Customs data in ECOWAS member countries (ASYCUDA) and improving the role of African Women in informal sector production and management (statistical component). Data Collection related to aid flows and development programmes in Africa, Assessment of Social Dimensions of Adjustment SDA. Most if not all of these projects originated during the economic crisis of the 1980s and were to a large extent meant to assist in responding to the crisis. They were or are still being executed by UN agencies and the World Bank.

Table 3. UNDTCD EXPENDITURE ON TECHNICAL CO-OPERATION PROJECTS IN STATISTICS IN AFRICA, BY SOURCE OF FUNDS 1/

1000US$

	1988	1989	1990
UNFPA	5573	6293	11051
UNDP	3763	3257	3479
TRUST FUNDS 2/	52	52	236
TOTAL	9388	9602	14766

1/ In accordance with UNDTCD Regional grouping the following countries are not included: Algeria, Djibouti, Egypt and Libya.

2/ Includes UN Trust Funds and associated agencies

111. As already stated, assistance channelled through UNDTCD represents only a fraction of total expenditure in technical co-operation. For a more complete picture comparable data from other executing agencies will be needed.

112. Earlier reference has also indicated that bilateral assistance in the field of statistics has been very considerable. However, except for France, no detailed figures are available for a period comparable to that being reviewed for UNDTCD.

113. France has a long tradition of technical co-operation in statistics, particularly with the French-speaking African countries. Emphasis was put on long-term assistance through the provision of resident experts and training of statistical personnel. However, short-term advisory services were also provided.

Table 4: FRENCH RESIDENT EXPERTS IN STATISTICS BY FIELD OF ACTIVITY

French resident experts Field of Activity	1980	1985	1988	1989
Statistical training	26	18	15	13
General statistics	-	20	13	11
National Accounts	50	13	10	12
Demography	2	5	-	-
Planning/Finance/Macro-Economy	11	12	10	8
Agricultural statistics	9	6	7	7
Forecasting	1	-	6	5
Budget consumption surveys	-	-	5	4
Statistical computing	1	3	4	3
Establishment statistics	-	-	3	2
Informal sector	-	-	1	-
Total	100	77	74	65

114. The number of resident experts under French technical co-operation has decreased by 35 per cent between 1980 and 1989. While the bulk of assistance continues to be in the fields of statistical training, general statistics, national accounts and macro-economics, increasing demands for assistance in other more specialized fields such as statistical computing, forecasting and budget-consumption surveys have been noted in recent years. The cost of the French bilateral co-operation in statistics was estimated at French Francs 50.5 million in 1990.

115. For the future, French technical co-operation will continue to support statistical training. However, more emphasis will be put on analysis, particularly economic analysis, and not only on data collection and data processing for which enough competent African statisticians already existed. Consideration will, however, be given to the strengthening of national statistical services, particularly in least developed countries, to enable them to respond in a timely manner to the data requirements at the national level. Due attention will also be accorded to research, dissemination of data and publication of methodological papers. The possibility of setting up sub-regional multinational centres, composed of half French and half African statistical experts is being investigated.

116. USAID has an impressive record of assistance to statistics in the region. Apart from funding some of the country projects in the World Fertility Surveys (WFS) and the Demographic and Health Survey (DHS), it has provided assistance to agricultural surveys and statistics as well as to national accounts and other economic statistics. Generally, this assistance has been given under umbrella programmes which may have as its objective, say, the increase of the agricultural sector's contribution to the national economy of country X. Thus it is difficult to separate the cost of the statistical component from other costs. USAID has also supported the training of African practicing statisticians at the International Statistical Programs Centre (ISPC).

117. UK ODA has continued mainly to assist Commonwealth countries in Africa. Between 1986 and 1990 assistance has been given to Botswana, Ghana, Kenya, Nigeria, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe. In some other countries training awards have been made for study in the UK or third countries, though increasingly these are linked to substantive projects. Beyond 1991 ODA support will continue in response to identified national needs where priority is attached to statistical development by recipient countries and is seen by them as a priority for ODA assistance. New projects are currently under discussion with the governments of Ghana, Kenya, Malawi, Namibia and Swaziland.

118. SIDA has also given considerable assistance to African countries through various multilateral organizations, and bilaterally through international co-operation between Statistics Sweden and NSSs. Countries assisted include; Ethiopia, Guinea-Bissau, Lesotho, Tanzania and Zimbabwe. Co-operation with Namibia will start in 1991, while negotiations are going on regarding similar assistance to Kenya, uganda and Zambia.

119. The Federal Republic of Germany has also a history of financial assistance in the field of statistics to African countries, including the funding of a post at UNECA and assisting in the development of national statistical offices. The Munich Centre for Advanced Training in Applied Statistics for Developing Countries has been conducting short-term courses for statisticians from developing regions, particularly Africa, since 1973.

120. The European Economic Community (EEC) through the Statistical Office of the European Communities (EUROSTAT) has for several years provided assistance in statistics in African countries, mainly in training and surveys. Recently, it has sponsored the creation of a statistical training centre in Lisbon, Portugal, for the training of professional level statisticians for Portuguese-speaking African countries. Assistance has also been provided to other statistical training centres in the region.

121. The Commonwealth Fund for Technical Co-operation (CFTC), which is the technical assistance arm of the Commonwealth Secretariat has supported a number of regional workshops, seminars, expert meetings, exchange visits, preparation of training manuals and pilot training programmes. It has also supported country programmes by providing technical advisers and has lecturers to institutions such as the Institute of Statistics and Applied Economics at Makerere University, Uganda.

122. The African Development Bank (ADB) is also planning to play a key role in African statistical development. It is already involved in statistical projects in Djibouti and Tanzania. Its role in this field is likely to be expanded in the coming years.

123. The above description of technical assistance activities is only indicative. In order to provide a comprehensive analysis, a study examining technical assistance in statistics by other organizations, including additional bilateral donors, and of statistically-selected programmes would need to be undertaken. Some examples of sub-regional or regional technical co-operation programmes which were undertaken over the last two decades are described below. Some highlights are provided on factors governing success or failure of these programmes.

The African Census Programme (ACP)

124. The ACP was established in response to requests from African Governments for technical and financial assistance to carry out population censuses in the 1970 round in accordance with UN principles and recommendations. Assistance was provided to 22 countries but not all countries were able to carry out the programme. The 22 countries were Benin, Burkina Faso, Burundi, Cameroon, the Central African Republic, Chad, Congo, Cote d'Ivoire, Ethiopia, Gambia, Liberia, Libya, Madagascar, Mali, Mauritania, Mauritius, Niger, Nigeria, Senegal, Sierra Leone, Somalia and Sudan. The development objective of the ACP was to enable these countries to have the technical expertise to carry out future censuses without recourse to internationally recruited experts.

125. Due to delays, some of the 22 countries carried out their censuses only during the 1980 round. Chad could not participate in either the 1970 or 1980 round because of internal strife and Nigeria canceled its 1973 census results because of suspected widespread falsification.

126. The ACP encountered serious initial problems because the programme had assumed that all 22 countries would be covered by 1974. This implied the recruitment and deployment of a large number of census experts in different fields such as cartography, organization, data processing, sampling, education/publicity and analysis. There was an average of eight (8) months time lag between the identification of the need for an expert and the fielding of that expert. Some experts on the other hand arrived before the general census adviser and thus, for sometime, did not receive adequate guidance and supervision. A few of the experts were no real experts, not having worked in a senior professional position in a census in their own country. Many African countries were highly critical of the quality of expatriate experts but to demand replacement in those days was fraught with difficulties for the country itself. Work normally stopped on the project until a new expert could be fielded. In one case, an expert rejected by one country for poor performance was promptly transferred to another country where he was subsequently rejected. Governments also took too long time to select experts from the panel submitted by the United Nations. The result was that in some cases the

preferred expert was no longer available. In some countries, conflicts among experts affected their output.

127. In a few countries, the Government's prior commitment to the census was not obtained before several experts were fielded. As no pronouncement could be obtained from the Government as to the date of the census, the work of the experts was largely wasted. In one case, this went on for about 4 years until all the experts were eventually withdrawn.

128. Problems with procurement were also encountered. In at least one country, vehicles and motorcycles arrived when the census was almost over. Difficulties also arose over the proper use of project vehicles.

129. Data processing was another area of concern. The experience with data processing in the 1960s had led almost all the countries participating in the ACP to request the services of data processing advisers. The performance of these advisers was very mixed. While a number of them completed their work in good time, a few of them were very disappointing. After they had left, experts from the UN Statistical Office and the UN Economic Commission for Africa had to help to produce the final tables. The time lag between completion of enumeration and publication of final census results was on the average only marginally reduced for the 1970 round of censuses compared with the 1960s.

130. The problems described above should, however, not lead to the conclusion that the ACP was a failure. It had its successes in various fields, especially in the training of local staff. So successful was the programme in this area that it was felt that very few internationally recruited experts would be needed for the 1980 round of population censuses in Africa. Unfortunately, that assumption had not taken into account the magnitude of brain drain from national statistical offices.

131. The main achievement of the ACP was, however, the large population related data sets made available for participating countries. Some of these 22 countries were conducting a population census for the first time and the information on size, structure and characteristics was so different from estimates made from earlier sample surveys as to compel policy makers to take a further look at the assumptions underlying their refusal to adopt implicit population policies.

132. Partly as a result of the ACP and partly due to national and international efforts 22 countries participated in the 1970 round and 47 countries in the 1980 round of population and housing censuses. The 1990 round is still in progress, with Chad preparing to participate for the first time.

133. To conclude this review of the successes and the failures of the ACP, an examination of the UN structure for executing the programme is necessary. The ACP had five main components: the Office of Technical Co-operation (OTC), the predecessor of UNDTCD, the UN Statistical Office (UNSO), the UN Population Division (PD), the UN Economic Commission for Africa and the countries. OTC was the executing agency, UNSO and PD provided technical inputs into project design and provided advisory services. UNECA also provided advisory services. This structure was criticized because it had created problems of communication and co-ordination. Communications within Africa and between Addis Ababa and New York were not as good as they are today and frequent delays in project implementation were caused by the failure to communicate quickly with other units in the overall monitoring system.

134. The ACP as a regional programme was replaced by the Regional Advisory Service in Demographic Statistics which is continuing to provide advisory services to African countries in the fields of population censuses, demographic surveys and civil registration and vital statistics. It has currently a staff of eight(8) advisers.

WORLD FERTILITY SURVEY (WFS)

135. The WFS was carried out by the International Statistical Institute (ISI) in collaboration with the International Union for the Scientific Study of Population (IUSSP) with funds provided by the United Nations Fund for Population (UNFPA), and the United States Agency for International Development (USAID). Contributions were also received from the United Kingdom's Overseas Development Administration (ODA), and other sources. The stated objectives of the WFS were:

a. To assist countries to acquire the scientific information that would permit them to describe and interpret the fertility of their population;

b. To increase national capability for fertility and other demographic research particularly in developing countries; and

c. To collect and analyze internationally comparable data on fertility and to make this available to researchers for comparative analysis.

136. The African countries that participated in the WFS with the (year of the field work in parenthesis) were: Benin (1981), Cameroon (1977), Côte d'Ivoire (1980), Egypt (1980), Ghana (1979), Kenya (1977), Lesotho (1977), Mauritania (1981), Morocco (1980), Nigeria (1981), Senegal (1978), Sudan-North only (1978) and Tunisia (1978).

137. The WFS made an important contribution to fertility data collection and analysis in Africa. There was also some evidence of the use of the results by policy makers and researchers. In the view of many critics of the WFS, it was a rather expensive undertaking with almost all its staff based in London, even though the project was meant for developing countries. There was an extensive use of consultants and some felt that expenditure under this line could have been reduced somewhat by using consultants only when necessary. The ISI's response to these criticisms was that if the headquarters of the ISI had been sited elsewhere in a developing country they may not have been able to attract the high quality staff essential for implementing the project efficiently. The use of consultants they argued was also cost-effective.

138. One important feature of the WFS was that personnel and technical matters were under the same director and thus the type of delays encountered in recruitment in the ACP were rare in the WFS. The WFS was, without question, able to achieve objectives (a) and (c) above but it met with only qualified success with respect to objective (b). For example, in Ghana, objective (b) was interpreted to imply the establishment of "a scientifically designed machinery for the conduct of surveys of human fertility levels and behaviour, and through this increase the nation's capability for fertility and other demographic research". However, the results of this capacity building objective are not obvious in that country or in any of the other African countries covered by the WFS. In fact, due to the need to meet deadlines the data for some countries were processed in London, thus depriving the country of the necessary experience.

139. A notable achievement of the WFS from the African countries' viewpoint was the large number of technical documents ranging from sampling to data processing. These have been found useful in implementing other surveys.

140. To conclude, the WFS made a significant contribution to the state-of-the-art of survey organization in Africa. Whether the results achieved were commensurate with the huge investment of funds will be debated for sometime to come.

The African Household Survey Capability Programme (AHSCP)

141. In 1973 at the eighth session of the Conference of African Statisticians, it was proposed that a sequel to the ACP should be considered which would provide demographic, social and economic data from household surveys during the intercensal years. It was also proposed that a Working Group should be convened in Addis Ababa in 1974 to discuss the administrative and technical details for establishing such a programme. Two consultants in surveys, D.B. Lahiri (India) and J. Waksberg (USA), were appointed.

142. The Working Group examined in detail the subjects to be covered in a multi-subject household survey and some of the possible sample designs. As proposed by the 1974 Working Group and modified by the 1979 Working Group on the Organization, Content and Methodology of Household Surveys, there would be a core questionnaire. It comprised items which would vary from year-to-year as well as topics delineating socio-economic characteristics needed for linking different surveys rounds. The African Household Survey Capability Programme was officially approved by the legislative organs of UNECA in 1978 and activities under the AHSCP started immediately, first only with UNECA staff and later also with the ILO adviser in household surveys. Project staff were recruited in 1979. In 1979, the AHSCP initiative was extended to other regions of the world as the National Household Survey Capability Programme (NHSCP), with AHSCP as its regional component. Thirteen African countries originally enrolled in the AHSCP and programmes usually covering a five-year period were drawn up with the assistance of UNECA, UN Statistical Office, ILO, FAO and UNICEF. However, due to financial problems not all the 13 countries could start the implementation of their programmes. Other countries, like Ethiopia and Benin, implemented only part of phase I of their programmes.

143. The AHSCP country projects had been drawn up with the underlying principle that donor assistance would generally be phased out at the end of five years. But the downturn in the economies of African countries in the 1980s meant that the principle of the gradual phasing out of donor assistance could not be adhered to.

144. When the programme was first formulated, the issue of establishing a Fund for Statistical Development which could be used to finance the AHSCP had been discussed informally with donors. They did not react favourably to such a suggestion. They argued that their assistance to statistics would continue to be given in the context of their country programmes and that it is up to the statistical authorities in the country to bring up the question of donor assistance to their appropriate Ministry so that their needs would be included in the agreed country programme.

145. The AHSCP, conceived by African countries themselves, appears to have been well-designed. They recognized the need for the programme to be country-specific and to be flexible in subject coverage and sample design.

146. AHSCP's principal achievement is that countries which have implemented the programme over a reasonable time span have developed the capability for nationals of the country to deal with all aspects of survey taking. This ranges from sample design through determination of questionnaire content and design to data processing and dissemination and is reflected in the number of

local experts trained on the job. However, this capability is not always fully utilised. The AHSCP has also helped to transfer skills from short-term experts and regional and interregional advisers to local personnel who are thus able to carry out surveys without undue dependence on external expert assistance.

147. Another advantage of the AHSCP is that countries selected their own topics, usually after a series of discussions between users and producers of statistical data. The programmes were also flexible enough to accommodate urgent topics or subjects not originally included in the survey programme.

148. The two main problems encountered in the AHSCP were funding and delays in releasing publications. Countries like Botswana and Zimbabwe released their data from the surveys relatively early but other countries like Ethiopia, Kenya and Mali had unacceptable delays in publishing their data, especially those from cyclical surveys. Funding was a general problem and a number of survey programmes had to be suspended or severely modified because of lack of donor support.

149. In spite of these problems, the AHSCP is still continuing. The wide use of micro-computers is now helping to cut down the time lag between completion of enumeration and release of data. The question of funding, however, remains a major obstacle to capacity building in survey work. The regional component of AHSCP is now part of a larger project entitled Statistical Development Programme for Africa (SDPA) which is reviewed later.

150. As already stated, the NHSCP followed the AHSCP as a means of extending the survey programme to other developing regions. Units within the regional commissions of the United Nations were expected to provide the main technical advisory services to countries within their respective regions. A Central Co-ordinating Unit (CCU) was set up within the UN Statistical Office primarily to play a promotional role and take the operational responsibility for projects executed by DTCD. In addition the CCU has undertaken methodological studies and published them. It also has an interregional advisory team. The CCU also plays a co-ordinating role with other UN agencies that have provided significant technical inputs for the programme. Consultations with donors are also undertaken by it.

Demographic and Health Surveys (DHS)

151. The DHS is a worldwide programme of demographic and health surveys started in 1984 and carried out in more than 40 developing countries of Africa, Asia and Latin America. It is co-ordinated by the Institute for Resource Development, formerly of Westinghouse, but later transferred to Macro Systems, Inc. The programme is

funded by USAID. It was meant as a successor to the WFS and drew on the experience of the latter.

152. The DHS was intended to obtain data on reproduction and fertility preferences, contraception, infant mortality and morbidity and health related issues. Phase I of the project covered surveys in Burundi, Egypt, Ghana, Kenya, Liberia, Mali, Morocco, Nigeria (Ondo State only), Senegal, Togo, Tunisia and Zimbabwe. Phase II which has already started also aims at covering some of these countries for a second time with a few countries being included in the programme for the first time.

153. The DHS has provided basic information for the use of policy makers and planners as well as social scientists in the following fields: nuptiality and exposure to risk of pregnancy, fertility, fertility regulation, fertility preferences, mortality and health etc. Like the WFS, its capacity building impact remains relatively weak because of the competing claims of completing the survey by a set deadline and capacity building. Whenever these two objectives clash, it is capacity building that usually suffers.

154. Another criticism of the DHS was that because it was funded by a single bilateral donor, political preferences of that country largely determined who was included in the programme. If the WFS had been similarly financed some African countries would not have been able to participate in the programme. This comment is being made here to underline the advantages of programmes executed or financed by multilateral agencies.

155. Other criticisms of DHS were its rigidity in questionnaire content. Many countries also interrupted some other surveys in order to incorporate a DHS even though a demographic or health survey had recently been conducted in the country.

National Accounts Capability Programme (NACP)

156. The NACP was conceived by UNECA in 1978 as a means of improving basic economic statistics and thus leading to a more timely and reliable estimation of national accounts aggregates. The basic approach was to cover not more than six countries a year with repeated visits. The first visit would be aimed at assessing the deficiencies of the economic statistics programme in that country, draw up a remedial plan and propose a series of activities such as developing or updating of business registers, promoting the use of administrative records, preparing a realistic time table of operations, identifying personnel to implement the programme. A second visit not more than six months later was to assess progress in implementing the plan drawn up during the first visit.

157. The programme was not a success for a number of reasons. First, the countries selected were those in urgent need of

attention but these were also the countries where incentives to work were lacking. In two cases, therefore, the UNECA adviser during the second visit found out that none of his previous recommendations had been implemented and no work in economic statistics had, in fact, been undertaken in the six months period. The second reason was that NACP had initially only one adviser attached to it. This was later increased to two but even two advisers were not enough to cover 50 countries, at least 40 of whom required some assistance. The third factor was that countries, mainly Ministries of Finance, were interested in GDP figures but not in the preparatory work that had to be done to derive meaningful estimates. Thus, limited national resources were devoted to improving basic economic statistics.

158. A fourth factor was the continuing debate about whether indicators, frameworks or basic statistical data should be given priority. The argument that neither indicators nor frameworks like the revised System of National Accounts could be developed without the basic data did not appear to have convinced some African countries supported by some internationally recruited experts. There was also pressure from external sources for the project to insist on the production of input-output tables, Social Accounting Matrix (SAM) and the Computable General Equilibrium Models. Finally, the advisers engaged by UNECA had differing views of what the main thrust of the programme should be. The views ranged from carrying out 3-4 week missions to help countries to compile national accounts for the complete system to just concentrating on the development of basic economic statistics and, if required, producing only estimates on GDP by kind of economic activity (Table 1 of the revised System of National Accounts United Nations, New York, 1968).

159. NACP helped a few countries like Guinea and Djibouti to update their estimates of national accounts but did not satisfactorily achieve its primary objective of building up national capability in basic economic statistics and national accounts.

160. NACP like the regional component of AHSCP was later incorporated into the Statistical Development programme for Africa (SDPA) project, financed by UNDP.

The Living Standard Measurement Study (LSMS)

161. The LSMS was set up as a research project of the World Bank to develop an analytical methodology, based on household surveys, for measuring living standards and analysing welfare issues. Three African countries participated in it, namely Cote d'Ivoire, Ghana and Mauritania. One of the striking features of the LSMS was the rather lengthy household questionnaire used. It consisted of 16 sections:

1. **Characteristics of Household Members**
2. **Housing**
3. **Education**
4. **Health**
5. **Economic Activities**
6. **Migration**
7. **Respondents for Round Two**
8. **Characteristics of Housing**
9. **Agro-Pastoral Activities**
10. **Non-farm self-employment**
11. **Expenditures**
12. **Food expenses and home production**
13. **Fertility**
14. **Other income**
15. **Credit and savings**
16. **Anthropometrics**

In addition, data were collected at the community level on prices and socio-economic infrastructure.

162. The main criticism of the LSMS was that the content of the questionnaire was determined outside Africa and was not readily amenable to country-level adaptation.

163. There were other objections to the LSMS. Its sample size was too small to provide precise estimates of some of the relevant indicators. Part of the cost of the survey was defrayed with a World Bank loan, which though given at a concessionary rate, was adding to the debt burden of the African States that participated in the programme.

164. One obvious success of the LSMS was the decentralisation of data processing. Data processing units (with micro-computers) were set up in the field and batches of completed questionnaires were sent to these units for editing. Questionnaires with errors were then sent back to the field for corrections to be made. Thus, soon after enumeration, fully edited responses in machine-readable form were available for final tabulations. This editing was, however, only for sections of the questionnaire covered in the first interviewing round.

Statistical aspects of the Social Dimensions of Adjustment (SDA) Programme

165. SDA is a project co-sponsored by UNDP, the World Bank and the African Development Bank. It was designed in response to the concern of African Governments and the donor community in general about the deteriorating social conditions (widespread poverty, undernourishment, drastic cuts in purchasing power of households ect.) which accompanied IMF/World Bank supported programmes of structural adjustment in many African countries. SDA was mainly

concerned with poverty issues but in order to deal with these effectively, the SDA Unit in Washington initiated the design and preparation of household surveys to collect a variety of data.

166. Initially ten African countries indicated their interest to participate in the household survey programme of the SDA. Currently, the figure has been revised upwards to about thirty-five.

167. In the one or two countries where the SDA surveys started early, the much criticised LSMS questionnaire was to have formed the basis of the development of the SDA questionnaire. After extensive criticism of the approach, the World Bank developed two types of questionnaires; the Priority Survey (PS) and the Integrated Survey (IS). It is also planned to collect data at the community level. As stated by the World Bank, the PS has two objectives, namely "to provide a quick identification of policy target groups" and "to provide a mechanism whereby key socio-economic variables can be easily and regularly produced to describe and monitor the well-being of different groups of households."

168. A prototype PS questionnaire has been finalised and made public. At the time of writing this document, the PS had not been administered to enough countries to enable an assessment of its usefulness. As planned, the PS will be administered annually to a larger sample size than hitherto used for the LSMS.

169. No comments can be made on the IS questionnaire apart from those made about the LSMS, because its final form has just been published. However for both the PS and IS it is not clear whether they meet an implicit or explicit demand for data required by African policy-makers and planners, it may be too early, at this stage, to make any categorical statement.

170. In a recent evaluation of SDA [4], the following comments, *inter alia*, were made:

(i) The usefulness of such surveys to individual government agencies depends on whether their particular interests and needs are consulted inthe design stage. Little or no such consultations - and especially none with the line ministries - has taken place. The establishment of users committees seems to be (a) an afterthought, and (b) an attempt to inform users rather than to consult them.

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[4] United Nations Development Programme Central Evaluation Office. The Social Dimensions of Adjustment (SDA) Project: An Interim Evaluation. Volumes I and II.

(ii) There is thus a "Mothers Knows Best" air about the proliferation of relatively standardised Household Surveys. In some cases, this reinforces an unfortunate traditional attitude which some Statistical Offices have to their "own" clients in Government; in others it is the Statistical Offices themselve that are being induced to undertake large scale activities of questionable value, at the expense of their routine activities.

(iii) Statistical Offices tend to be badly disrupted by the superimposition of large new programmes without a careful analysis of the existing programmes and of the absorptive capacity of the agency; no such analyses are made.

(iv) Programmes with substantial recurrent costs financed from abroad tend to cease when the financing stops. "No examinatin of the means of sustaining these programmes after SDA financing sources could be found."

171. The World Bank does not accept these criticisms. It claims that criticism (a) is unsupported and wrong. "No evidence is given to back up their (evaluation team's) claim. In fact, the delays experienced in launching the surveys in a number of countries is precisely because of the insistence on the presence and effective functioning of the user committees before launching any field activity. In addition, the report misses the point that users committees systematically include line ministries."

172. With respect to (b) above, the World Bank has again stated that the conclusion of the Evaluation Team is wrong. "The facts are that the SDA Unit, per its mission stated in the Policy Agenda, is developing household surveys methodologies that are (1) modular, and (2) designed from the beginning to be adaptable to local country conditions. In particular, the questionnaires developed for the Integrated Survey and the Priority Survey are by definition pilot questionnaires that provide a basis for the development of national questionnaires adapted to country needs and conditions by the authorities in the country." While the World Bank emphasises that the PS questionnaire is only a pilot or model or an illustration, it is also on record as indicating that so much thought has gone into identifying and presenting the required key indicators, that the scope for extensive modification at the national level is rathere limited. However, Chad and Senegal have both significantly modified the PS to suit their local conditions.

173. In responding to criticism (c), the World Bank cites the examples of Ghana and Malawi which are also referred to by the Evaluation Team. "In Ghana and Malawi, the SDA data collection

programme was introduced into an existing statistical programme as a result of a tripartite collaborative effort between the Government Statistical Office, the UN Statistical Office, and the World Bank. In both cases, joint UN Statistical Office/SDA missions visited the country and agreed with Government authorities on a co-ordinated program." The criticism of the disruptive nature of externally imposed statistical programmes, not only those of the World Bank, remains largely unanswered.

174. Finally, the World Bank replies to criticism (d) by stating that "the additional recurrent cost implications of the surveys are systematically worked out by the local authorities with the support of World Bank and ADB staff." However, many national statistical services express great doubt about their ability to meet these additional costs after donor support has ceased.

175. An attempt has been made in this section to present a balanced picture of the SDA surveys by reflecting not only the views of critics but also the responses of the World Bank. It is to be noted that SDA which has generated a lot of debate may have raised the level of awareness and attention being paid to statistics. African statisticians are in the best position to ponder on some of these issues so that they can decide what they would like to include in their statistical programmes and in their survey questionnaires.

PAN ARAB PROJECT FOR CHILD DEVELOPMENT (PAPCHILD)

176. PAPCHILD has been sponsored by the League of Arab States and supported by the Arab Gulf Fund for UN Development Programme (AGFUND), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO) as well as the United Nations. The project now in its first phase covers five Arab countries, four of them in Africa i.e. Egypt, Mauritania, Somalia and Northern Sudan. The project envisages essentially surveys of maternal and child health, including infant and maternal mortality. The survey has already been conducted in Mauritania and the preliminary results analyzed. The final report was to be published in May 1991. Data collection in Egypt has been completed and the data is being processed. Arrangements for initiating survey activities in Somalia and Sudan will follow thereafter. While the first phase of the PAPCHILD Project is underway, arrangements for a follow-up Phase II have almost been concluded. This phase will cover 8 Arab countries, 5 of them in Africa: Algeria, Morocco, Tunisia, Libya Arab Jamahiriya and Djibouti. It is expected that the field work on the survey in Algeria will commence in June 1992.

177. NHSCP and the UN Statistical Office have at the global level been closely involved in technical backstopping of the project specifically in development of survey methodology and basic

documentation, including sampling and analysis. Additionally, the methodology and survey instruments developed for PAPCHILD have been incorporated in the survey programme for Ethiopia and in survey programmes developed by NHSCP for Burkina Faso, Guinea and Angola.

The Statistical Training Programme for Africa (STPA)

178. STPA was approved at the same time as AHSCP. However, due to recruitment delays, its regional component became operational only in late 1979. Its main objective was to make Africa self-reliant in the provision of trained statistical personnel at all levels. All the centres mentioned in paragraphs 86 and 87 participate in the programme. In addition, there are eight associate centres including the Munich Centre for Advanced Training in Applied Statistics for developing countries and the International Statistical programmes Centre (ISPC) of the US Bureau of the Census.

179. Activities in STPA focussed on training of trainers for which a number of fellowships were awarded, meetings of directors of STPA centres, workshops, preparation of guide syllabuses for in-service, middle and graduate level training courses, provision of short-term teaching consultancies and advisory services.

180. STPA which was funded by UNDP and executed by UNECA was assisted in its work by assistance provided by the European Economic Communities (EEC), under its own STPA programme, to the centres participating in STPA. Assistance included provision of equipment, material and technical support to workshops.

181. STPA has contributed to the training of a large number of statistical personnel at all levels. The main constraint to further development in this direction was its inability to provide or to persuade donors to provide funding for student fellowships. Its fellowship programme for training of trainers was also affected by the decision by the meeting of Directors of STPA Centres for the duration of such awards to be limited to not more than two years. Lack of funding for extension of physical infrastructure also limited the intake of students to these centres.

182. Some centres, also require and have requested for longer term (at least one academic year) teaching assistance and this could not be provided since the funds available to UNECA were not sufficient for that purpose.

Statistical Development Programme for Africa (SDPA)

183. The SDPA project was established in 1987 when three separate projects funded by UNDP and executed by UNECA were merged. All three components of SDPA, namely the regional components of AHSCP, STPA and NACP have previously been reviewed in this section.

184. SDPA continued to provide short-term teaching assistance to the STPA centres, supplied limited equipment, awarded fellowships for the training of trainers and organized workshops and seminars in national accounts, household surveys, training etc. to improve the knowledge and performance of serving statisticians. Although funds for running the 15 statistical training centres are given by national governments and donors like the EEC, SDPA in its co-ordinating role and in revising guidelines such as the Guide Syllabuses for professional-and-middle levels, as well as for in-service training, could be said to have played a key role in turning out large numbers of professional and middle level staff. This view was supported by a recent evaluation team appointed by UNDP to review the programme, although the team did recognize the limited awareness of the Programme in contrast to its component parts.

185. The main problem of SDPA, as already mentioned under AHSCP, STPA and NACP was that it did not receive enough resources to increase its impact in African countries. With only four UNECA project experts (one for household surveys, two in training and one in national accounts), one ILO adviser in household surveys and a limited number of consultancies, it achieved more than the number of personnel involved would suggest.

Overall evaluation of Technical Co-operation

186. In the previous paragraphs of this section, there has been a review of technical co-operation activities of UNDTCD as well as presentation of the major international statistical programmes in the African region. In the following paragraphs, a summary of the overview of the impact of technical co-operation projects is given.

187. In spite of the recent adverse comments on some aspects of technical co-operation, namely that it has not been so successful in its primary objective of developing national skills and transferring knowledge, there may well be exceptions. A number of donors such as SIDA have no reason to believe that their aid programmes in Statistics have not been successful. There is enough evidence, however, to support the view that most programmes are not sustained when the technical adviser leaves or the funding ends. There are many reasons for this. Firstly, African Governments have not accorded a high enough priority to statistics and thus counterpart funds for such programmes are not always available. When the external financing ceases, invariably all Government support is cut off. Secondly, national professionals do not have enough incentives to carry on the work. Low salaries, often not sufficient to meet modest basic needs combined with poor management of some statistical offices make it impossible to sustain the work that had been started by the expatriate expert.

188. Other constraints to the achievement of the long-term goals of technical co-operation programmes/projects is the tendency on the part of some donors to show more interest in immediate results than in training. If, for example, problems are encountered in a country with regard to data processing, the often preferred solution has been to send the data to the headquarters of the executing agencies to be processed instead of creating within the country the capability to process the data. This has been the case in some of the international statistical programmes previously reviewed.

189. Another problem is the high turn-over of staff in national statistical offices. In some countries, this has made it difficult to get counterpart staff to work with the expert for a reasonable length of time to enable the transfer of skills. The solution that more than one counterpart staff should be provided to each expert can in most countries not be applied because of the overall staffing situation.

190. There is also the problem of the co-ordination of donor assistance. In the area of population censuses, some progress has been made in the co-ordination of assistance to African countries. There is a regular meeting of the major donors (UNFPA, USAID, World Bank, UK ODA, CIDA etc.) to exchange information on financing census projects. The projects themselves are formulated by countries with the assistance of the United Nations (UNECA, UN Statistical Office and UNDTCD) and then the donors indicate what parts of the cost of project they are willing to meet. In theory, no project is given final approval until all the funding commitments are in place. Such co-ordination, though not perfect, had made it possible for the African Census Programme to run smoothly as an understanding has been reached between UNFPA and WFS at the time that the latter would have to be postponed until ACP was completed in a particular country.

191. The example of co-ordination described in the preceding paragraph has, however, not been followed in other areas. On the contrary, there is at least one case of a statistical office which was paralyzed due to competing demands for statistical activities among donors. National statistical services should have been determined to resist some of these external pressures but their weak financial base made them vulnerable for the temptations by donors. This is to be contrasted with non-African countries like India and Brazil who resisted all attempts to carry out WFS-type surveys in their countries. India argued that its own National Sample Survey programme provided it with all the data on fertility it needed.

192. Proper co-ordination of statistical activities among donors benefits both donors and recipient countries. For the latter it ensures that they do not have to deal with competing claims and

that, as demonstrated by PAPCHILD and DHS, by combining forces in a country sufficient resources become available to implement a cost-effective survey. For the donors, it ensures that some of the duplicate requests that have become all too familiar would no longer be encouraged.

193. It is difficult to assess the impact of incentive payments on capacity-building in African statistical services. In the early days of technical assistance, donors did not tolerate any requests for either supplementation payment of local salaries, wages and allowances. When the economic situation in African countries deteriorated, this rule was, however, suspended to make such payments to staff in least developed countries. Later, this was extended to all countries. Such incentive payments helped to achieve the immediate objective of the project but created long-term problems, as is illustrated in the following example for Sudan. During the Sudan Fertility Survey (SFS), the WFS made incentive payments to interviewers and their supervisors who had to spend time away from home. Immediately after the SFS, Sudan undertook an income, consumption and expenditure survey funded by the Government of Sudan. As night allowances paid by the Sudanese Government were much less than the WFS rates it was almost impossible to get supervisory staff to spend the night on official duty away from their normal stations and the quality of work suffered. It is clear, however, that without the incentive payments, the externally funded projects would largely fail. But because of that practice, Government-funded projects are likely to be of poorer quality in countries used to such incentive payments. There are other corrupting influences of technical co-operation projects which are well known and need not be elaborated upon in this report.

194. The past practice of always preferring international to national experts also contributed somewhat to the brain drain from national statistical offices. Thus, countries like Cameroon, Congo, Ghana, Kenya, Nigeria and Senegal have a number of statistical experts working for international organizations in multilateral technical co-operation projects while their countries are being supplied with expatriate experts. If expatriates are given preference over competent national professionals, the latter will invariably be tempted to attain expert status in another country.

3. THE STATE OF AFRICAN STATISTICS IN 1990

195. In section I, a short history of African statistical development from 1960 to 1989 has been given. In this section, the state of African Statistics in 1990 is reviewed. For this review, the reports of recent assessment missions by UNECA and the World Bank have been taken into account.

Organization of national statistical systems

196. Most NSSs are centralised with a Central Bureau of Statistics (CBS) responsible for the production of all types of statistical data. This does not preclude other organisations like the Central Bank from also producing data. It also does not exclude ministries from having small statistical units.

197. The CBS or CSO; (see footnote 1) is generally part of the civil service of the country and comes under the supervision of the Ministry responsible for planning. There are exceptions to this general rule. Ghana, for example, has an autonomous Ghana Statistical Service which is outside the civil service but remains in the public sector. Nigeria's head of the Federal Office of Statistics is at the same salary level as the administrative head of a Ministry (formerly the Permanent Secretary). His immediate subordinates, are Directors, equivalent in rank to normal departmental heads or directors within the Planning Commission. The status of the CSO also varies from country to country. In countries like Cameroon, Malawi, Kenya, Senegal, Tanzania and Zimbabwe it is a category A department (i.e. direct access to the Permanent Secretary). In other countries like Sao Tome and Principe, it is either Grade B or C departments, which implies usually that it can deal directly only with persons of the rank of Principal Assistant Secretary or lower. CSOs in category B or C have difficulty in promoting their programmes or obtaining funds since their status is low and are usually not given high priority in their activities.

198. With respect to the legislative basis for the establishment of the NSS and its statistical activities, there is a difference between most of the English-speaking countries and French-speaking countries. This is due to the legal frameworks bequeathed by the colonial powers. For most English-speaking countries (i.e those that were British colonies or protectorates), there is usually a Statistical Act which sets out the functions of the NSS, penalties for non-co-operation with its officers, for mutilation of documents, for false information etc. Thus no separate Act is required for carrying out a population census, or health survey or similar activity. In some of these countries like Zambia, however, the dates for the census have to be gazetted. For some French-speaking countries, even when a general decree for statistical activity exists, separate decrees have to be published for each census or survey. In countries like Benin, this is a rather detailed decree which includes the names of signatories to cheques, usually the Minister of Planning and the Director of Statistics. Thus, if the Minister or Director is changed, a new decree has to be issued. For Benin's population census planned for 1976 but which was postponed, nearly 200 decrees were passed without the census taking place. In Central African Republic, there is no general legislation on statistics. What exists is legislation

regularizing the grants to the Division of Statistics and Economic Studies (DSES) which is the name of its NSS. However, most countries in the region irrespective of language group have their own legal system which deals adequately with the issue of penalties.

199. Organizationally, by 1990, most national statistical offices were structured along three principal technical divisions: Economic Statistics, Demographic and Social Statistics and Data Processing. There were many deviations from this norm. In Nigeria, there are three service and five operational departments. The service departments are personnel management, finance and supply, planning, research and statistics. The operational departments are agriculture and household statistics, economic statistics, economic and social analysis, field operations, data processing, management and dissemination. There is a data processing unit in each department. Mali and Zambia also had an Agricultural Statistics Division.

Statistical Infrastructure

200. Each statistical office should have a certain basic supporting framework such as a decent building with adequate furniture, equipment such as typewriters and word processors, transportation, printing facilities and photocopier, communications facilities and a statistical library or reference unit and adequate staff. Less than half of the African statistical offices had all these basic elements. A few of them had unsuitable premises. The Central African Republic had a new building for its Division of Statistics and Economic Studies constructed only recently (i.e. after 1988). Sudan for a long time had perhaps the most unsuitable premises for statistics. Even Nigeria cannot be said to have ideal premises with the Federal Office of Statistics spread over at least three locations in Lagos.

201. Word processors have now been installed in many statistical offices but in some of the offices their use is restricted to the secretaries of a few privileged staff. Adequate printing facilities do not exist in many NSSs in spite of efforts of the international community to remedy the situation.

202. What is very striking is the substantial number of statistical offices without a well run statistical library or reference unit. A large number of publications from the United Nations system is supplied regularly to NSSs but these do not appear to find their way into an organized reference unit where those who have to apply the recommendations in them can easily refer to them. Thus, state-of-the-art techniques that have been publicised in some of these handbooks and manuals remain unknown to some of the African practitioners in the field. The problem of reference units is often neglected when assessing shortcomings of national statistical

offices but it is one of the urgent issues that need to be tackled if statistical services in the region are to be strengthened.

Mechanisms for co-ordination among producers and between producers and users

203. For many countries of the region there was the total absence of formal mechanisms for co-ordination among producers. There are two aspects of the problem. Within the same office, there is sometimes failure to co-ordinate activities and two competing field activities could be programmed by different sections of the same NSS. There is also lack of harmonization of concepts, classifications and definitions within the same office. For producers belonging to different institutions the position is more serious as reflected in the different trade figures given by the NSS and the Central Bank in Uganda, Rwanda and Zaire and the very divergent estimates of agricultural production given by different institutions in Nigeria. Attempts to bring producers together have met with very limited success because once the institutions start producing statistics they tend to interpret collaboration and co-ordination as only the first steps in the efforts to eliminate their jobs.

204. Attempts to bring them together under the umbrella of Users and Producers Committees has also been largely unsuccessful. Users and Producers Committees formed in relation to specific issues e.g. early warning system and population census appear to have functioned satisfactorily. But overall Users and Producers Committees do not in general appear to have worked well. There may be reasons for this. Some of the users may not consider some of the topics discussed of relevance to them. Users tend to send low ranking officials to these meetings who may not always be aware of the data needs of their organizations. When high ranking users attend such meetings, they find their proposals being rejected out of hand by the Statistical Office. This tends to discourage the users who do not realize that it may take them sometime to get their proposals properly understood by the statisticians and that a continuing dialogue will yield better results.

205. To conclude, it is obvious that co-ordination among producers and between users and producers had not been too successful by 1990. This resulted in unnecessary duplication of efforts. However,co-ordination is so important to statistical development that a solution has to be found to make it work. Formal mechanisms for user-producer dialogue should be supplemented by regular informal contacts.

Subject Coverage

206. The subjects covered during the period 1960-1989 have already been reviewed. This section merely updates the information contained in Section I.

207. The current statistical outputs of national statistical services include agricultural statistics (though in some countries agricultural data collection is the responsibility of the Ministry of Agriculture), industrial statistics, construction statistics, distribution statistics, price statistics, external trade statistics, employment and wages statistics and national accounts. All these come under Economic Statistics.

208. Under Demographic and Social Statistics, subjects covered include population (fertility, mortality, migration and population characteristics), housing and nutrition. Other social statistics like health and education are produced by statistical units within the appropriate Ministries.

209. In addition to the above subjects, special topics like income, consumption and expenditure are covered in surveys. Literacy is also covered in surveys. The informal sector has begun to receive special attention and Zambia, for example, has begun to analyze the informal sector data collected as part of the 1987 Labour Force Survey. Other examples of countries that have carried out informal sector surveys are Mali, United Republic of Tanzania (Zanzibar) and Central African Republic (Bangui only).

Data production

210. Data continues to be collected through administrative records, censuses and surveys. For population censuses, most countries have now established a decennial series ensuring that those carried out in the 1980 round will be repeated in the 1990 round, unless the internal security makes it difficult for this to be done. Administrative records are still being used for trade and financial statistics but NSSs have not shown enough innovation in tapping other administrative records like social security or national provident fund records. With respect to surveys, the picture is more confused. A number of countries have formulated their own survey plans but funding constraints have forced some of them to opt for programmes that they would not otherwise have selected had they been able to secure funds for their own projects.

211. The advent of the micro-computer is revolutionizing the way in which statistical activities are conducted and statistical data is handled. Micro-computers are now involved at all levels of data collection and analysis from questionnaire design through to the production of final reports and the use of advanced graphical techniques for data presentation. A large number of software

packages are now commercially available to facilitate the task of the statistician, as it is shown in the table below. However, national statistical offices have not been able to stay abreast of the continuous and rapid developments that are taking placed in the fields of software and hardware design. They are often subject to the conflicting advice of experts whose technical assessment of the products on the market may not fully take into account the special procurement and servicing problems that most African statistical offices face, nor the training and technical support implications.

SOME PC-BASED SOFTWARE PACKAGES USED FOR STATISTICAL DATA PROCESSING AND ANALYSIS

FUNCTION		NAME
Questionnaire design	:	FORMWORX WORDPERFECT MICROSOFT WORD plus other word processing packages
Data entry and correction	:	ENTRY POINT IMPS RODE-PC ISSA CENTRY/CONCOR
Database and file management	:	D-BASE IV PC-FOCUS ARIEL U-SP CENTS4 plus other database management packages
Statistical analysis	:	SPSS SAS-PC PC-CARP plus other statistical analysis packages
Graphical presentation	:	HARVARD GRAPHIC plus other graphic packages

The above is not an exhaustive list but is intended to classify some popular software packages by function. Many of the packages listed above are capable of performing more than a single task.

212 Many African countries have had problems arising out of the provision of hardware and software by some donors. Some of the hardware have not been compatible with other equipment already in use. In addition, some software supplied have not been among the most appropriate available on the market. Also because analysis of data is not a priority in most statistical offices, knowledge of analytical software packages is very limited.

213. By 1990 also, more professional statisticians had received adequate training in processing on micro computers and could thus assume direct responsibility for processing some of the data they collected. Large-scale and complex surveys and foreign trade statistics will continue to be handled by data processing staff as far as system design and programming are concerned. But for the processing of small surveys and other less complex statistical compilations, computations and analysis such as national accounts calculations and analysis of surveys or demographic data, statisticians can be trained to take their responsibility. This is especially so now that there are various software packages to

assist them in their work. FAO's strategy for processing the 1990 world census of Agriculture, for example, makes it possible for statisticians to assume responsibility for large parts of the process.

214. The United Nations and other multilateral and bilateral donors have responded to this shift in emphasis from computer specialists only for data processing to both computer and subject-matter specialists sharing in the data processing tasks, by providing extensive training to subject-matter specialists in the use of the micro-computers for statistical data processing. The benefits of such training are not always visible in national statistical offices because even where there is a reasonable number of micro-computers, access to them is so restricted that computer trained subject-matter specialists cannot use them.

215. Data dissemination appears to follow the traditional mode of distribution of published material. Due to delays in printing these take years to reach the intended users by which time most of the data is only of academic interest. Different modes of dissemination now exist; tapes, diskettes, computer print-outs etc. NSSs have not yet generally adopted data dissemination policies and thus some of them do not know what to do when requests for original data tapes are received. Sometimes, this results in institutions in the country being put at a disadvantage compared to research institutions outside. There have been cases when research institutions outside have had easy access to data tapes while those inside the countries have been refused.

216. One of the lessons of the WFS was that short summaries of highlights of survey results prove more useful to policies makers than the voluminous reports of tables and text. However, at the beginning of the current decade very few NSSs had adopted the use of short summary reports to publicise the results of their surveys. A few countries were issuing newsletters but these were prepared by statisticians with no training in communications and usually do not have the desired impact.

Timeliness and quality of data

217. With respect to publication of results, the use of desk top publishing techniques was not widespread in statistical offices in 1990. Thus, there were still considerable delays between completion of data processing and publication of results. A number of African countries that participated in the 1980 round of population censuses (i.e. 1975-1984) have still not published all their census reports, at a time when, in some cases, preparations for the 1990 round had started.

218. Such delays in printing of results and reports have obviously an adverse effect on the timeliness of the data. By 1990 there had

been a modest improvement in the timeliness of the disseminated data but there was still a substantial number of countries with a huge backlog of unprocessed and unpublished data. Delays between processing and publication occur irrespective of whether the NSSs have their own printing facilities or rely on external printers to produce their results.

219. The quality of data had by 1990 shown only modest improvement. Information on age and income remain very poor, inspite of various attempts to improve the data. Modest improvements in age reporting recorded in some countries are attributable to the higher proportion of the younger generation possessing birth certificates. With regard to income, some countries appear to have given up and use expenditure as proxy for disposable income. This does not imply that questions on household income are not included in surveys on income, consumption and expenditure but rather, that when included, income is used mainly to cross-check individual household expenditure data. Further experimentation in this area through the use of household diaries, more frequent (i.e. daily in rural areas and at three days intervals in urban areas) are still continuing but by 1990 none of these experiments could be said to have yielded results which could lead to the adoption of a single model in most African countries.

Utilization of statistical data

220. In the field of analysis and applications of data, there was an emerging consensus that statistical data were now being subjected to critical analysis and more extensive use than previously. Unfortunately, this process was not being driven by those who should be the primary users of such data, namely, the policy makers and planners within the country. Instead, the major users and analysts of statistical data in the region had been the researchers within the Universities and the multilateral and bilateral agencies.

221. Recent efforts by UNDP and other agencies to revitalize the planning process should enable planners to undertake long-term perspective studies. Such studies which had started in a few countries were leading to planning becoming more technical and requiring critical analysis of trends in agricultural and livestock production, education, health, population, employment, industrial production, etc. For this handful of countries, a lot of use was being made of statistical data. It is not clear from the surveys undertaken by UNECA and the World bank whether this process was leading to the NSS being appraised of data gaps to enable it to try to draw up a programme of data collection for the future which will take account of these.

222. Apart from the main planning ministry, there are also several ministries, departments and parastatals where statistical data

could have been used more extensively. A number of countries now have social security schemes but the use of the emerging statistical data is rather limited at present. In the past, actuarial tables used had not benefitted from the variety of statistical data available in the countries.

Critical analysis of the State of African Statistics

223. In the preceding paragraphs, an attempt has been made to describe and illustrate the different aspects of the state of African statistics at the beginning of the 1990s. In this subsection, an overview of the overall performance of national statistical services will be given. In terms of outputs most African countries produce some data on economic, demographic and social statistics. Some of the data are rudimentary and of poor quality. However, national resources and environment statistics tend to be neglected by most statistical offices. A notable exception is Botswana which is planning to initiate work in this area. In the other countries, the fact that there is no formal work in that field needs to be qualified. Most countries have a lot of data in different ministries and departments but there has been no effort to organize the data into a coherent framework which can be referred to as statistics on natural resources and environment.

224. Less than half the countries of the region have statistical work programmes. This makes it difficult to relate output to resources. The absence of a work programme in most statistical services is also linked to the generally poor management of statistical services. This is partly due to the fact that while most directors are very competent statisticians very few of them have received any training in management. The lack of managerial skills has resulted in the failure to set priorities, to design a well balanced human resources development programme for their offices including the selection of qualified persons for further training and placing them after training in positions where they can make the best use of their training, properly overseeing technical co-operation projects in their offices to ensure that they achieve their objectives, making the best use of scarce resources and building bridges to the user community.

225. In spite of the use of subject-matter specialists to carry out some of the tasks previously undertaken only by computer specialists, the brain drain of computer specialists, namely systems analysts and programmers, to the private sector has led to qualified data processing staff at senior levels being in short supply in many countries. The problem can be solved simply by allowing market forces also to work in the civil service. All the other solutions so far including increasing the supply of trained data processing specialists have not worked because increased supply has always been overtaken by increased demand.

226. Another problem with the present state of statistical offices is the ratio of professional (including senior management) staff to junior and supporting staff. This is rather low and leads to inadequate supervision. The establishment levels of almost all African statistical offices will have to be revised. In the present economic climate, the solution need not always be to increase the numbers of professionals but could also be merely to reduce the number of junior and supporting staff. If this is done carefully, there will be no loss of output.

227. Reference has already been made to the need for improved management of national statistical services. As a corollary to that, there is need for improved staff-management relations. There are several offices where there are no regular departmental, divisional, sectional or unit meetings so that some staff including senior professional staff do not always feel that they "belong" to the institution. Poor communication between management and senior professionals sometimes manifests itself in the fact that reference documents received by the office from abroad are never referred to the senior professional directly involved in the implementation of the aspect of the office's work programme to which the documents relate.

228. Finally, in many statistical offices, the results of several years of technical assistance are not clearly visible. A good example is Ghana where for nearly 20 years there was a technical co-operation project in national accounts funded by UNDP. The present weakness of the Ghana Statistical Service in economic statistics does not show any signs of this long-term investment in institution building in the field of national accounts. The brain drain, unattractive service conditions and the failure of some experts to regard on the job training as an essential element of their functions are partly to blame for this situation. Similar examples can be given in relation to data processing in Nigeria with respect to both the Federal Office of Statistics and the National Population Commission which is responsible for demographic statistics and the population census, and the Zambian Central Statistical Office with respect to agricultural statistics.

229. Part of the cause of the indifferent state of African statistics at the beginning of this decade is attributable to the poor career prospects as reflected in schemes of service and general lack of motivation at all levels of statistical staff. Statisticians are not fully recognized as professionals and thus in many countries do not have the salaries commensurate with their training. In addition, the work programmes are not challenging and this generally leads to apathy which ends up in indifferent performance.

230. African Governments' perception of their statistical offices vary from country to country. There are countries where the

Director of Statistics is highly valued by Government and serves on important committees. Senegal and Zambia are good examples of this category of directors. At the other extreme there are those who are not consulted even in fields directly related to statistics.

4. MAJOR CHALLENGES IN THE 1990S

Dynamics of demand for statistics

231. In recent years there has been a growing debate on the evolution of African statistical systems as to whether they were supply or demand driven. One school of thought argues that African statistical systems had from the time of independence been supply driven and merely applied "internationally determined statistical frameworks, classification schemes and methods... without much adaptation... Even in the demographic area, concepts such as household, based on non-African situations were clearly inappropriate but were applied without modification"[5] The opposite school of thought argues that statistical units were established in Africa in the pre-independence days in direct response to the demand of the Treasury, as mentioned in an earlier section of this strategy document and after independence the scope of data collected was expanded to meet the demands of African policy makers and planners for economic, social and demographic statistics.

232. The confusion over what really happened in African countries with regard to statistics is due partly to the lack of adequate documentation to illustrate developments in that era and partly to a misunderstanding of the facts, in relation to Africa, namely that Africa is not one homogeneous continent with respect to statistical development and that sweeping generalizations have always to be avoided in describing any aspect of its statistical development. First, with respect to the adaptation of concepts, it has to be made clear that the concept of household was extensively discussed in meetings organized by UNECA. Some countries regarded it as unsuitable for Africa and were reluctant to use it. Other countries thought that with suitable modifications it could be applied in their countries. The most extensive early adaptation of the "household" concept was undertaken in Ghana. For its 1960 population census the concept was rejected but was later applied to the Post-Enumeration Survey and the detailed definition used was amply illustrated in its Interviewer's Manual. In Senegal, however, for its first population census, the concept was

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[5] Chander, Ramesh: Information Systems and Basic Statistics in Sub-Saharan Africa. A Review and Strategy for Improvement. World Bank Discussion Paper No. 73. The World Bank, Washington DC (1990).

unacceptable. The 1976 population census did not use the household concept but rather the concession. It was much later that it decided to adapt the household concept for its censuses and surveys. The first recorded use of that concept for Senegal was 1978 in the Senegal Fertility Survey.

233. With respect to frameworks and classifications, it should be noted that the revised System of National Accounts was accepted for use in Africa generally by expatriate experts working under technical assistance programmes because there were very few national experts. By 1975, however, the position had changed and when a similar document, the System of Demographic and Social Statistics, was presented for adoption at the 9th session, of the Conference of African Statisticians (Lome, October 1975), it was rejected as inappropriate to Africa. The international classification systems also met with a mixed response. Some countries like Ghana prepared their own classifications system based on the international systems and also prepared conversion tables from the national occupation and industrial classification to the corresponding international classification. Other countries selected only a one digit classification for most of their statistical work. The residual group generally adopted the international classifications without modification because they had no expertise in adapting international classification to suit local conditions.

234. The above detailed explanations have become necessary because of the tendency to put all or most African countries in the same category when the question of adaptation of concepts, definitions and classifications is discussed in different circumstances and situations. Contrary to what appears in the literature elsewhere, there have been extensive adaptations in many African countries.

235. As has been clearly stated by several persons in different fora, one cannot categorically state that there is no demand for the statistical data that African countries now produce. Only when the supply is shut off can one obtain from the reaction of users whether or not a demand for the Statistics exists. In one African country, an informal proposal to discontinue civil aviation statistics was vehemently opposed by the primary users of the data, including the national airline. The issue therefore is not solely that of supply vs demand driven, as some have stressed but one of what priorities should be accorded to the various statistical outputs of NSSs. Also because of delays in delivery of outputs, some users find the data out of date and largely useless, leading to the inevitable and possibly erroneous conclusion that there was no demand for such data.

236. An additional question is what appropriate mechanism exists for expanding subject coverage. For example, most national statistical services do not have specific outputs in the field of natural resources and environment statistics. Is there an appropriate procedure for ensuring that such a new but very important area will be included in the work programme? It is probably the failure of these offices to respond to such demands that has led to the whole debate over supply vis-a-vis demand. Unfortunately, these discussions have not taken cognisance of the fact that in this field the supply could be equated to latent demand.

237. Another aspect of the demand debate is the pressure from various quarters: national, regional and global for new and more complex data. In theory at least the users-producers committees should be able to take care of the national demands. In practice, such committees have little influence on the content of the work programme of the statistical office. A more effective way will have to be found to ensure that the heads of statistical offices pay attention to national demands especially those originating from policy makers and planners.

238. Data requests originating from regional and global organisations deserve very careful study. Many of these originate from resolutions adopted by these bodies to which most of the African countries belong. For example, the Lagos Plan of Action and the Final Act of Lagos, The United Nations Plan of Action for African Economic Recovery and Development, Agrarian Reform and Rural Development, the World Declaration on the Survival, Protection and Development of Children, Structural Adjustment etc. are all laudable programmes but require extensive statistical data for monitoring which African countries in their present financial situation cannot afford to fund. There is thus careful need for the NSSs to draw up a coherent and cost-effective work programme that their resources can afford. In this, priority should be given to internal demand. External demand for data should only be considered when it fits in with the countries (and not necessarily NSS's) priorities.

239. In the past some bilateral and multilateral agencies have exerted undue pressure to have their sponsored programmes implemented by the statistical office. Usually the promise of funding and the corresponding incentive payments have been able to persuade the statistical authorities to implement such programmes. In a few cases, however, where the NSS had rejected the proposal, some agencies have bypassed the Director of statistics and gone directly to the Minister or President to have their project forced on the statistical office. The proponents of a demand driven

statistical system should be the first to admit that demand from external bodies cannot be put on the same level as that originating from internal authorities and has to be subjected to careful scrutiny before it is met. An efficient body should be set up to do the screening of new requests from local and external sources but once a decision has been given, this should be accepted by all parties.

240. The issue of demand driven statistical systems has often been linked with that of policy relevant data. The confusion in the discussions on that subject arises from the failure to take into account a longer term perspective of what is policy relevant. For example, prior to 1974, the year of the first United Nations organized World Population Conference in Bucharest, most African countries did not regard birth rates as important enough to have any bearing on their policies. Thus, if statistical offices had been narrow minded they would not have collected and published detailed data on fertility and its determinants. Soon after the Bucharest Conference, however, attitudes towards family planning changed and African governments started to request rather detailed time series data on fertility, mortality and growth rates. Because the statistical offices had past data available, it was easy to respond to the government's request. The point being made here is that what may not seem policy relevant at a given time may turn out to be so later and the possibility of such changes in policy should be taken into account by the statistical offices in deciding on their work programmes.

241. It is almost impossible to decide whether any of the statistical data being currently produced by African countries is policy relevant, since policy formulation is a complex process which takes into account a nexus of factors of which statistical data form only one component. What can be assessed quickly is the potential uses of the data for policy formulation. On that basis, the statistical outputs of statistical offices will mostly qualify as being policy relevant, even though changes in structure and presentation may make them more clearly so.

242. There has also been a persistent debate as to whether the Ministry of Planning should have the sole responsibility for deciding what data should be collected and published. It has been argued that while the Ministry of Planning is responsible for macro-economic planning, the sector ministries are responsible for planning within their own fields. Thus they have equal claim to data produced by the statistical system. In addition, administrators and researchers also need data and they have to be catered for by the statistical system.

243. In the previous paragraphs, the data demands of the public sector have been discussed. The private sector has also need for data and although their demands cannot be considered at the same level as those of the public sector, it should be noted that in African countries, the state is currently encouraging the private sector and is offering that sector all types of incentives to enable it to grow. Provision of data to help the private sector in its plans for growth should thus be an important component of any statistical data production programme. It is too early yet to request private sector institutions to pay for such services in some countries.

244. Demand for data can thus be seen as emanating from different sources and a rational system for dealing with it in the context of priority setting has to be evolved in African countries. There is also the need to stimulate internal demand for data. In a number of countries such as Kenya and Zimbabwe, symposia to discuss the results of censuses and surveys have been one way of stimulating demand. There is need to promote the effective and extensive use of data. The Ministry of Planning and the NSS will have to join forces in doing this, with the universities contributing substantially to such exercises.

Core list of subjects to be covered

245. There has been in the past a discussion of whether recommendations on a minimum or core list of subjects to be covered by every statistical office are necessary or desirable or useful. The consensus at the global level has been that every country has its own specific data requirements and priorities. Therefore preparing a global list is unnecessary. Regional organizations have emphasized that data requirements are country specific. However, UNECA has prepared a list of major requirements which may apply to most African countries. This is subsequent to the priority areas specified in the Lagos Plan of Action and the Final Act of Lagos and reproduced in the Addis Ababa Plan of Action for Statistical Development The main headings in economic statistics from a paper submitted to the Fifth session of the Joint Conference of African Planners, Statisticians and Demographers [6] are:

a. prices and exchange rates
b. major productive activities

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[6] UN Economic Commission for Africa. Priorities for Improving Basic Economic Statistics. Fifth session of the Joint Conference of African Planners, Statisticians and Demographers Addis Ababa, Ethiopia March 21-28, 1988.

c. employment and earnings; the economically active population
d. government revenue and expenditure
e. external trade and balance of payments
f. money and banking; public sector borrowing; debt
g. national accounts (basic level)
h. living standards (household consumption)

246. In addition to these basic economic statistics, there should be selected topics in demographic, social and environment statistics which will vary considerably from country to country. It is worth mentioning that these topics cover the four broad data fields recommended for action in the World Bank's long term perspective study publication Sub-saharan Africa from crisis to "Sustainable growth". The four field are Social and Demographic data, National resources and environment, price and production statistics, national accounts.

247. UNECA also in 1988[7] proposed a diagram showing the inter-relationships among various specialized statistical fields as a way of guiding national statistical services to devise their own more comprehensive programmes. Fig 1 shows the different fields of statistics of concern to African countries and their inter-relationships. It is necessary for national statistical systems to devise an appropriate framework for their statistical information system which should be a component of the overall country information system. It should be a framework easily understood in the country and not a complex one which can only be interpreted by a sophisticated expert.

248. The actual selection of a core list for the country will have to be done by the country using the same mechanism set up for determining priorities in the statistical work programme, as suggested in Part II of this document.

Statistical Infrastructure

249. The production of good statistics requires not only well qualified staff but also a suitable working environment. Ideally, all units of a national working statistical office should be housed

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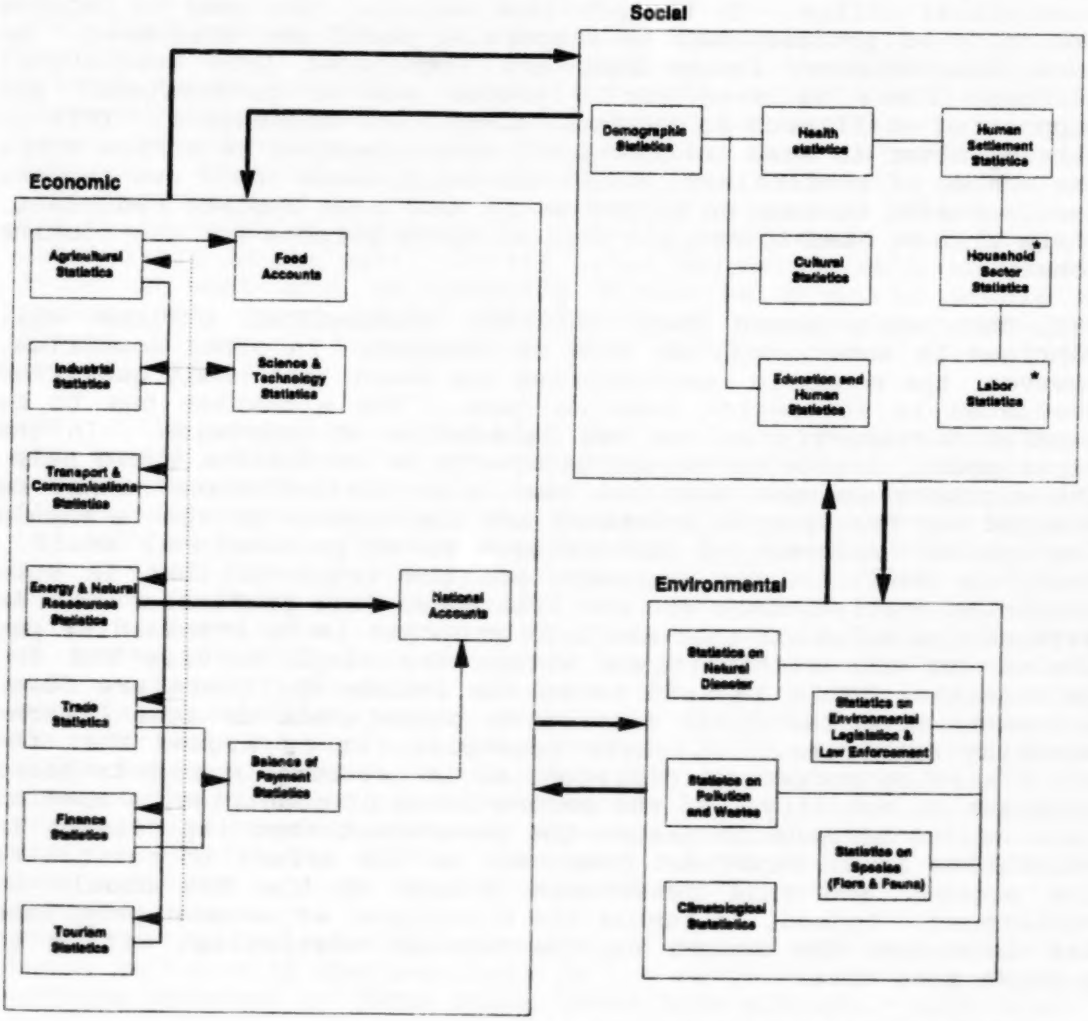
[7] UN Economic Commission for Africa. Data collection related to development programmes and aid flows: statistical deficiencies and recommendations. Fifth session of the Joint Conference of African Planners, Statisticians and Demographers Addis Ababa, Ethiopia March 21-28, 1988.

in the same building. For some countries, this may require a large expenditure of public funds which in view of the current economic crises in African countries, governments will be reluctant to provide. However, governments should bear this in mind so that when the economic situation improves consideration could be given to implementing this proposal. In the meantime, communications between offices should be improved. Telex and fax machines are no longer a luxury.

FIGURE 1
Fields of Statistics and their Inter-relationships


Social
Demographic Statistics
Health statistics
Human Settlement Statistics
Cultural Statistics
Household Sector Statistics *
Education and Human Statistics
Labor Statistics *
Economic
Agricultural Statistics
Food Accounts
Industrial Statistics
Science & Technology Statistics
Transport & Communications Statistics
Energy & Natural Resources Statistics
National Accounts
Trade Statistics
Balance of Payment Statistics
Finance Statistics
Tourism Statistics
Environmental
Statistics on Natural Disaster
Statistics on Environmental Legislation & Law Enforcement
Statistics on Pollution and Wastes
Statistics on Species (Flora & Fauna)
Climatological Statistics

* These components have both economic and social aspects

250. Other types of equipment are indispensable to the successful running of a statistical office. In particular, appropriate technological innovations have to be taken into account, otherwise operations like printing will continue to take a long time and cause unnecessary and unacceptable delays in the release of statistical data. However, there is need for caution in the acquisition of new equipment. It may be useful for the country to have a Technological innovations Committee for its civil service, especially, to ensure that equipment bought are the most appropriate for the country, that there is back up facilities and that for computers at least that there are compatibility with others within the system.

251. Manpower is another key part of the underlying framework of a statistical office. In the previous section, the need to improve the ratio of professional to supporting staff was discussed. As more technological innovations are introduced into statistical offices, there is need for a proper mix of professional and supporting staff such as typists, clerks and messengers. This is already clear in some international organizations in Africa where the number of professional staff who can process their own reports has increased to such an extent as to make some typists redundant. There will be need to retrain some of these persons for non-routine jobs.

252. The brain drain from national statistical offices will continue in some countries such as Senegal. In other countries, however, the economic restructuring has meant that newly qualified graduates in statistics have no jobs. The situation has to be handled differently in the two categories of countries. In the first group, improving career prospects in statistics would help. The argument against that has been that statisticians cannot be singled out for special treatment and that career prospects should instead be improved for all categories of professional staff . There is merit in the argument but the truth is that in some countries statisticians are not treated as full professionals. An alternative solution that has been proposed is to standardise pay scales for all statisticians within the civil service and the parastatals. This is said to be the reason why there are fewer movements from the civil service to parastatals in some French-speaking countries. In these countries, it is argued that the civil service/parastatal differential is not large enough to cause substantial mobility. In the second group of countries, a special case has to be made to assure the government that improvement in statistics is an important component of the effort to revitalize the economy and thus reasonable growth of the NSS should be encouraged. Indeed, in Zambia the structural adjustment programme has increased the demand on the Central Statistical Office to provide more data.

253. A problem of major concern to many African Governments is the poor management of their statistical offices. There are well documented cases of the statistical office losing its effectiveness and relevance when the previous dynamic head leaves to suggest that the performance of a statistical office is highly correlated with the managerial ability of its head. The issue will become very critical in the 1990s when directors of statistics will have to deal increasingly with managing their offices with very limited resources. Training of directors has been suggested as one solution but that alone will not be enough. Like all senior staff, the Director should be accountable to a person who has the time and the interest to monitor his work closely.

Human resources development

254. The human resources of a department constitute one of its most precious assets. The way these resources are harnessed and used to a large extent determine the quality of the outputs of that office. Harnessing the resources implies bringing the staff up to a certain level of expertise so that they can be used to produce those outputs. Thus training, both formal and informal, is the most important element in human resources development. The nature of the training which statisticians should receive has been discussed extensively in the past. In the 1990s the debate will continue to focus on what sort of training should be given to middle and professional level staff? Should formal training be emphasized? Should it be of the type to lead to the award of a higher qualification?

255. It is generally agreed that the training of statisticians at all levels should be oriented towards applications. Theoretical courses should themselves contain illustrations whenever possible of real life applications. The Guide Syllabuses prepared by UNECA had this in mind. There should however be periodic monitoring of the use of these Guide Syllabuses and their content should be reviewed at least once every ten years to reflect the state of the art. In particular, training of trainers should *inter alia* focus on material that can be used for these applications. The introduction of practical courses like agricultural statistics, official statistics, social statistics and national accounts into the curricula of professional level training, as proposed in the UNECA Guide Syllabuses should generally be implemented. In some centres the range of practical courses taught should be expanded. Professional statisticians and planners in institutions such as the Central Statistical Office, Ministry of Agriculture and Central Bank could be invited to give some of the lectures.

256. The training of middle level staff should continue on the same basis as now with the proposals on the revision of the content of courses proposed by UNECA being taken into account. Like the

professional level training, the course content should be periodically reviewed and changes made to reflect current priorities and latest data collection and processing methods.

257. With respect to further training of professional staff, priority should be given to practical courses of short duration (i.e. not more than 9 months). Such courses are currently organized by the Munich Centre, the US Bureau of the Census, the US Bureau of Labour Statistics, University of Kent and the Institute of Developmental Studies, Sussex. The possibility for specialized training in labour statistics also exists at the *centre regional Africaine de administration de travail* (CRADAT), Yaounde for French-speaking countries. In 1991, the ILO Bureau of Statistics started to conduct short duration (6-week) courses in labour statistics at the Turin Centre (Italy). The courses are to be given in English, French and Portuguese. Each year's course will be devoted to one language group only. WHO also gives training courses in epidemiology which has a significant statistical content in alternate years in French in Bamako, Mali and in English in Nairobi, Kenya. Efforts should also be made to use some of the existing centres belonging to the Statistical Training Programme for Africa for specialized training in agricultural statistics, survey organization and sampling, and health statistics. The Institute of Statistics and Applied Economics (ISAE) at Kampala, Uganda and the Ecole Nationale Supérieure de Statistique et d'Economie Appliquée (ENSEA), Abidjan, Cote d'Ivoire could be considered for such courses.

258. Giving priority to short-term courses should not be interpreted to mean that training up to masters level should be discouraged. For specialized fields like economic statistics and demography, existing Masters degree programmes especially at the Statistical training centres and the UN regional population training and research institutions provide a valuable service and should continue. The issue is whether for the work of statistical offices training beyond Masters degree is necessary or desirable. Except for those statistical offices sufficiently developed to undertake in-depth substantive or methodological research, there does not seem to be a valid case for post-masters training for staff of national statistical offices. However, most statistical offices are being urged to undertake some analytical work and the position with regard to post-masters training will have to be reviewed from time to time. Whether the training in analytical techniques should be one which leads to the award of a degree is also a question which each country will have to answer for itself. It was clear when the Regional Institute for Population Studies was being set up that if the Institute had not entered into special relations with the University of Ghana to enable its graduates to be awarded certificates and degrees, the quality of its intake might have been adversely affected.

259. On the job training especially in data processing with or without short-term courses will continue to be the best way of training subordinate staff. Provision should, therefore, continue to be made for on the job training, short-term management training will also be necessary for different levels of responsibility.

260. Another aspect of human resources development which deserves consideration is the use made of statistical personnel after they have received specialized training. Due to the lack of a coherent staff development policy in most NSSs, the selection of staff for specialized training and their placement is done in a rather haphazard way leaving management sometimes open to charges of nepotism and personal biases. It is not uncommon to find a person sent for training (say) in demography and being posted immediately after that to the national accounts section. Thus specialized training of staff does not always lead to improvement in performance. Sometimes, a completely unqualified person is sent for training who is unable to profit from the tuition offered. In such cases both the institution nominating the trainee and the one offering the training are equally culpable. The latter institution should have screened the candidate's background and qualifications before accepting him/her for training. In the 1990s a stricter screening process will have to be applied if fellowship awards are to lead to meaningful staff development.

261. Promotion procedures also give rise to some discontentment among staff. There is sometimes lack of transparency in the ways in which promotions are effected. Promotion guidelines need to be prepared for each statistical office and implemented fairly to ensure that staff perceive promotion exercises as just. Schemes of service will also have to be reviewed periodically to ensure that they reflect the "market" situation within the civil service and that staff are not being unduly kept on one level for too long when there are ways of correcting this. Job descriptions will have to be prepared, effective and fair methods of rating staff introduced.

Data production

262. It has always been generally accepted that a good statistical programme makes use of a careful mix of administrative records, censuses and surveys. Any attempt to over-emphasize one of these components at the expense of the others leads to an imbalance in the programme. In the 1990s, NSSs should make maximum use of administrative records. They are already being used for trade statistics but this has to be expanded to cover data on social security and similar records. Efforts should also be made to improve the coverage (geographic and event) of civil registration. National statistical offices are not usually responsible for civil registration but with the Ministry of Health, the Ministry responsible for local government and other interested bodies they can promote improvements in the system.

263. Censuses in the 1990s will come under considerable pressure because of the high costs they entail. Agricultural censuses have already suffered in the region and in future there will be more emphasis in African countries to use agricultural surveys to collect most of the data that are required by users of food and agriculture data. Population censuses have so far not been affected because of the massive financial support of UNFPA and other donors. Local costs which used to be borne solely by African Governments are increasingly being paid for by external donors. Hopefully, the prospects for population censuses will continue to be bright in the 1990s. However, there is the need for African countries to consider making increasing use of sampling in censuses. For example, complete enumeration could be limited to a few topics like name, age, sex and relationship to head of household. All other items could be investigated on a sample basis, with the more statistically advanced countries using a multi-phase sampling scheme to collect different items of information. The issue of replacing population censuses with population registers has not yet surfaced in Africa as it has in some countries in Western Europe. There are no viable population registers that can replace the data contained in population censuses and so the efforts to make the latter less expensive should continue to receive serious attention.

264. With industrial censuses, the position is that very few countries have participated in the current World Programme of Industrial Censuses because very few donors are willing to give grants for carrying out such operations. Here again, industrial surveys may have to take the place of censuses. A solution has, however, to be found for the coverage of small enterprises, most of which belong to the informal sector. This sector is becoming very important in most African countries because of the failure of the formal sector to absorb the large labour force.

265. It is clear from the foregoing discussion that surveys are assuming prominence in the statistical agenda of Africa not only because censuses are more expensive and administrative records are not currently providing adequate economic, social and demographic data but also due to the urgent need for certain types of information which can be more quickly supplied through surveys. This should not supersede long-term plans to obtain some of the data as by-products of normal, administrative records. For example, mortality rates are currently more often estimated from surveys than from censuses because survey data is usually of superior quality in relation to census derived data. Unfortunately, the survey data on mortality are also subject to all kinds of deficiencies. The longer term aim is to develop the system of registration of births and deaths in African countries from which more reliable mortality data can be derived. A well developed registration system provides better quality data and, what is more important, at lower levels of disaggregation. For

health planning and monitoring, mortality data for small areas are very important.

266. In connection with data production the area which may prove to be most challenging is likely to be data processing. There have been so many technological innovations in the past few years that the prospects for even more phenomenal advances are very bright. It is clear that for the 1990s microcomputer technology will dominate many aspects of the work of the statistical office. Of particular interest to Africa is decentralised data entry including the use of portable machines. Decentralised data entry was one of the features of LSMS in Africa. In addition publications with graphical material are easy to produce and this will allow statistical offices to produce more attractive publications.

267. There is also need to standardize the magnetic media in which data can be exchanged. Most African statistical offices are using the MS/DOS family of operating systems and if double sided and double density diskettes holding about 360KB of information are used by all, then this will make for easy exchange of data files. This exchange of data files is particularly important within countries if the data collected by statistical agencies is to be fully exploited by all users.

Data quality

268. In the 1990s users are likely to be more critical of the quality of data produced by African statistical offices. The new demand for harmonised data which will arise out of the preparations for the African Economic Community will also have implications for data quality. Not only will users be more technically qualified to analyse data but they will be exposed to a wide range of such data which will make it easy to detect both internal and external inconsistencies in them. The statistical agencies will need to examine the data outputs for quality. Quality control techniques will have to be applied not only at the data collection stage but also at the data processing and dissemination stages.

269. A number of statistical offices already apply rudimentary checks in the field work such as verifying work of interviewers in the field on a 100 per cent or sample basis. However, the application of quality control techniques similar to those applied in industry is rare.

270. Assessment of the quality is also rarely done. In population censuses, very few African countries carry out well designed post-enumeration surveys to measure coverage error and almost none of them has plans to undertake content error evaluation. For the 1990s more African countries will have to address the subject of coverage and content errors and hopefully experiments based on local conditions and not on imported, and in some cases

inappropriate, methodology would be carried out to find the best possible approach for such evaluations.

Data Applications and Analysis

271. More applications of statistical data are being made in almost every sphere of activity: policy formulation, planning, administration, research, teaching, sports, to name just a few. The 1990s should see the field of data applications not only widen but also deepen. More sophisticated applications will be made in Africa similar to those that are already being made in the developed world. The statistician therefore has to accept the challenge of producing the types of data that will make this revolution in data applications possible.

272. Closely related to the above is the scope of analysis that will be attempted in the region in the decade ahead. One of the criticisms made against NSSs is that they themselves do not carry out any meaningful analysis of their data and thus are unable to identify deficiencies in them. It has also been argued that data that has not been analyzed is not worth using and that data analysis in Africa has to progress if data applications are to be extended.

273. In general, the NSS must undertake, as a minimum, simple first stage or descriptive analysis of its data. For this, there are well publicised techniques for exploratory data analysis. Most statisticians have received training in the use of these techniques and would accept the challenge of carrying out such tasks.

274. For in-depth analysis of data, the collaboration of research units within Ministries, parastatals and the Universities will be required if meaningful analysis of the data is to be undertaken. If the results of the analysis are to be useful to policy makers and planners, then the more technical analytical report will have to be condensed and simplified into 3-6 pages before it is transmitted to the policy makers and planners.

Data dissemination

275. Reference has already been made in section 3 to data dissemination. The issues that are likely to arise in African countries in the 1990s have already confronted developed countries, namely the different media and formats in which outputs should be disseminated, data dissemination policy and the marketing of outputs.

276. The tradition of releasing data only through statistical publications is slowly dying out and a number of NSSs already issue computer print-outs and tapes to some of their clients. This diversification of statistical products will continue in the 1990s

and in some African countries will reduce the demand for statistical publications. Statistical offices have therefore to prepare themselves adequately to meet this challenge. Large data sets together with appropriate graphical material can even be stored on CD-ROM disks which can be disseminated to users with the appropriate equipment. Where there are appropriate communications links within and between countries, data can even be transmitted from one location to another, provided the appropriate equipment is installed.

277. Where their dissemination policies are restrictive, statistical offices should move away from the notion that all statistical information is **confidential**. According to the legislation existing in most African countries, information on individual persons, enterprises etc is confidential. Data in which identification information has been deleted in such a way that they cannot be traced to the person or enterprise or organization to which they refer should no longer be regarded as confidential. In any case, each African country has to develop its own dissemination policy which **should not be unduly restrictive** and allow for maximum applications and analyses of its data.

278. A more recent issue that has arisen is whether statistical services should not make more vigorous attempts to **market its product**. Some African countries sell some of their products but since the proceeds do not benefit the statistical office directly, the latter does not make strenuous efforts to sell these products. Secondly since there is a tradition of obtaining these products free of charge especially by institutions in the public sector which constitute the majority of users, any sudden shift to sales may create confusion. A mixture of free distribution and sales with limited free distribution to carefully selected clients should be pursued. This shift in approach where it does not already exist should be introduced slowly and should coincide with the time when statistical offices are sufficiently revitalised to be able to produce good quality reports in time. If reports are late and of poor quality, no attempts at marketing will yield worthwhile results. Also for products to sell well they should be made attractive to users.

279. It has been argued that marketing of products will help statistical offices to assess consumer demand but, as Sadowsky points out this is a more difficult undertaking. He states that "An assessment of this demand is important if the national statistical service is to allocate scarce resources among both ongoing activities and new developments such as computer based statistical services. To the extent that the national statistical service plays a direct integrated role in policy planning and assessment within the government, both the type and level of user demand will be easier to ascertain, since the statistical service will be called upon to address issues relevant to current policies.

Assessing demand at the level of publications is considerably more difficult, and does not address the latent demand for other forms of statistical products that might be more useful, such as machine readable products, products available through computer based statistical systems of various kinds, and more integrated statistical systems such as the geographic information systems...." So if consumer demand is to be ascertained partly through sales of products, then all products should be widely publicised and reasonably priced. No statistical product can be priced for full recovery of costs but the pricing policy should take account of what the market can bear.

Statistical Data Bases

280. Regional, subregional and some national statistical data bases already exist in the region. Their creation was motivated by the desire to store the vast quantities of statistical data that were available in such a way that they could be retrieved and utilised. The ECA Statistical Data Base (DB) was the first to be established, since then national data bases have been established in countries such as Algeria, Tunisia and Benin. Other countries like Nigeria are currently developing their statistical data bases. The 1990s will see further discussion of several aspects of the development and use of statistical data bases such as generality of storage system, flexibility of retrieval systems, Data Base Management Systems (DBMS), physical access to DB and development of DBs on microcomputers.

281. In designing national DBs, there should be an early specification of their content and functions. This is to ensure that provision is made for enough disk space for data storage and on line retrieval. If care is not taken at the development stage, problems will arise when certain categories of data are stored off line but are often required for use.

282. Another issue that has to be resolved is what DBMS is to be used. In the African experience so far, the DBMS used has been a special software developed by the computer manufacturers and this sometimes does not have the essential features for managing the data base very efficiently. It is essential in designing DBs that standards be developed to make it possible for software for storage, retrieval etc. to be moved from machine to machine. The experience of UNECA in which the DB is resident on a particular computer hardware and also uses special software, appropriate to that machine has meant that the UNECA DB has up to now been transferred to countries with the same equipment as the one on which the DB was installed at Addis Ababa.

283. To assist African countries to avoid some of these problems, there is need for guidelines to be prepared for the development of national statistical bases. UNECA or any other appropriate

organization can prepare such guidelines for consideration of most of the important parties interested in the development of DBs. The adoption of such guidelines will make it possible for proper links to be established with regional and subregional data bases. The communications changes of the past decade suggest that such links are possible in the 1990s and should be properly exploited.

284. With microcomputers being further developed to increase their capacity their use as the machine of choice for establishing data bases in some African countries cannot be ignored. Issues of data security, confidentiality, integrity and ownership which apply to main or mini frame computers will also apply to micro computers

285. The experience of UN agencies like FAO and WHO in setting up data bases should be taken into account by national, sub-regional and regional organizations when establishing their own data bases.

Priority areas of statistical activity

286. The increasing demand from both internal and external sources to national statistical services for more complex data sets and for involvement in activities which may not be regarded as statistical will persist into the 1990s. An example of a non-statistical activity in which some NSSs have been asked in the past to participate is the issuing of identity cards. In a few countries there were requests to combine the population census with the issuance of identity cards. This was resisted in some countries but supported by the national statistical service in at least one country. Pressures like this will continue into the 1990s. Issuing of identity cards is seen as having clearly political implications and thus as an activity in which the NSS should not get involved.

287. There will be continuing pressure to supply data that can be used to monitor programmes that have been endorsed by African Governments such as those mentioned earlier (para. 238). The NSS cannot possibly supply all these data within the next few years and therefore priorities will have to be set in determining which data can be made available and what statistical activities will yield to such data being supplied in a timely manner. Reference has previously (para. 248) been made to this issue and will be further discussed in Part II.

Budgets

288. The economic down-turn in Africa has meant that limited resources are available for statistics as well as other activities within the public sector. The present difficulties of the NSS are also affecting other public sector units. The situation may persist during most of the 1990s. NSSs will therefore have to prepare budgets which bear this in mind. Developed countries are

also experiencing economic problems and increased financial support for statistics cannot always be assumed. NSSs therefore have to mainly depend on Government and local resources than on external financial aid.

289. The preparation of work programme budgets which link final outputs to resources to be made available is one way of convincing Governments that resources are being wisely used. External assistance will generally be forthcoming only if statistics is given a high priority by government in its negotiations with donors but NSSs have to ensure that when external funding ceases the activities started with foreign aid can be sustained. One approach which has been tried in at least one country is to accept a project supported by external aid only if counterpart funds are earmarked in the government budget. Once the budget line has been established, it is possible to increase the provision in subsequent years.

Co-ordination

290. The question of co-ordination within the NSS, among statistical producers within the country and between donors and the recipient country will assume more prominence in the 1990s as resources become scarce. Mechanisms will have to be established to co-ordinate activities within the NSS itself. There is ample evidence to suggest that such co-ordination does not always exist in some offices. Co-ordination among statistical producers has also suffered through jealousies but will have to be ensured if statistical operations are to be made cost-effective.

291. Co-ordination between donors and the recipient country in the field of statistics will have to be strengthened to avoid unnecessary competition and duplication of efforts. It is in the interests of the donors as well as the recipient country that such co-ordination should exist. One donor disappointed by lack of co-ordination in the past has proposed that it would prefer to be either a lead or sole agency in a small number of countries to being involved in multi-donor assistance to any country. Thus one of the major challenges of the 1990s is to make co-ordination of donor support work.

Role of Women

292. The need to address women's issues was given prominence in the Nairobi Forward-looking Strategies for the Advancement of Women. There are two aspects of this which will be discussed because of their implications for statistics in the 1990s. The first is the contribution of women to development. The Strategies called for appropriate efforts "to measure and reflect these contributions in national accounts and economic statistics and in GNP". The International Research and Training Institute for the Advancement

of Women (INSTRAW) has already taken the initiative in collaboration with UNECA and the UN Statistical Office to prepare a "Handbook on Compilation of Statistics on Women in the Informal Sector in Industry, Trade and Services in Africa." Gender desegregated data especially of persons in the informal sector are some of the requirements. There will be other demands which can only be met if NSS follow the advice given over the years by the UN for all data to be desegregated by sex and age where possible. The UN Statistical Office has established statistical data base on women while FAO has created one on women in agriculture. The African components of the two data bases should be made easily accessible to African institutions.

293. The other issue relates to women in statistics currently, there are very few women professional statisticians in NSSs and in the training institutes (both trainees and trainers). This is a general problem in professions which require considerable knowledge of mathematics. There is need to redress the situation. Concerted efforts should be made to encourage women to train as statisticians and also to include qualified ones among the staff of the training institutes.

Development of methods and standards

294. There is need for more methodological studies in Africa and the application of standards in NSSs. As Africans become better qualified, they need to take the initiative to undertake statistical experiments, pilot and methodological studies more suited to conditions in Africa. There are several areas calling for such studies such as objective measurements, respondent's estimates in agricultural yields, coverage and content error evaluation in censuses and surveys, ideal sample sizes in income, consumption and expenditure surveys etc.

295. There is also need to apply uniform standards in concepts, definitions and classifications, especially, within the same country. In addition the issue of quality control has become one of the important challenges of the 1990s. NSSs therefore have to institute quality control methods in all phases of their activities from data collection to publication of results so that the error in their final products (the published data) is kept to the minimum.

296. To help NSSs to carry out these two main functions, they need to establish Methods and Standards divisions within their offices. Staff should include mathematical statisticians and one or two subject-matter specialists as well as experts in field operations. These should be operational as soon as possible. Where a full division cannot be set up, a small unit can initially be established with limited terms of reference to enable quality concerns of users to be addressed.

Role of national, subregional and regional statistical associations.

297. A number of national, subregional and regional statistical associations now exist in Africa. In the 1990s they are expected to play an enhanced role in the development of statistics in the region. At the national level, meetings of the professional body can be used to discuss methodological as well as substantive issues of interest to the country and the expertise of the association can also be utilised to carry out assignments on behalf of the national statistical system. Similar efforts can be made at the subregional level.

298. At the regional level, the African statistical Association (AFSA) in 1989 convened its first scientific conference at which technical papers were discussed. A second scientific conference is tentatively planned for Rabat, Morocco, in 1992 at which African statisticians are expected to discuss various issues arising out of their work. Such a forum which brings together official, academic, business and other statisticians together provides an excellent opportunity for exchange of experiences. AFSA should compile a roster of African statistical experts who could be recruited for work in the region. Government support for national, subregional and regional statistical associations is necessary to ensure that these associations continue to provide useful service to countries. Where national associations do not yet exist, efforts should be made to establish them.

Summary of issues

299. In this section, some of the topics which may pose major challenges to Africa in the 1990s have been discussed. These include:

-competition between internal and external demand for data,
choice of a minimum core of subjects for NSSs,
-management of statistical offices,
-human resources development including training,
need for a balance among censuses,
-surveys and administrative records,
-assessment of the quality of statistical outputs,
-type of analysis to be undertaken by national statistical offices,
-formulation of data dissemination policy,
-marketing of statistical outputs,
determination of priorities,
-preparation of work programmes,
-co-ordination,
-increased involvement of women in statistical development,
-need for methods and standard units in NSSs.

300. These issues will have to be dealt within each country if progress in developing statistics is to be made. The rest of this document outlines some strategic approach towards dealing with these issues.

PART II:

STRATEGY FOR STATISTICAL DEVELOPMENT

5. GENERAL

301. The **Addis Ababa Plan of Action for Statistical Development in Africa in the 1990s** called for the formulation of detailed strategies for its implementation. Based on an analysis of the history of statistical services in Africa since the early 1960s, the record of external technical and financial assistance and major challenges up to the year 2000 such a strategy is herewith presented as it was adopted by a Working Group comprising representatives of 20 countries, the academic as well as bilateral and multilateral donor community and international organizations.* The strategy does not only outline what could be done at the national, subregional, regional and global levels to revitalize African statistics but also proposes ways of implementing its various elements. In drawing up this framework, all involved agreed that, given the diverse states of statistical development in countries on the African continent, no uniform prescriptions should be administered. While the need for a joint effort in and among countries, with support from the international community, was the driving force in formulating the strategy, individual countries will have to set their own modalities in implementing it in accordance with their national plans and priorities.

302. The strategy needs to be understood in the context of several important recent initiatives which aim not only at reinforcing the development planning capacity in the African region but which seek to place renewed emphasis on development itself: African Heads of State adopted in 1989 the African Alternative Framework to Structural Adjustment for Socio-economic Recovery and Transformation (AAF-SAP) and in 1990 the African Charter for Popular Participation in Development and Transformation. The public debate leading to and following the launching of these two initiatives was instrumental in promoting a discourse on development in which the broad participation of the people at all stages, including the decision-making stage, is becoming a reality. Broadening the basis for policy decisions and increasingly localizing planning will require additional, better-targeted and publicly accessible data. In the field of information and statistics, popular participation in developing and transforming African economies and societies will entail vocal demands to

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* the Working Group on the Implementation of the Addis Ababa Plan of Action in Africa in the 1990s (UNEP Headquarters, Nairobi, Kenya, 16-20 July 1991) was organized by UNECA and sponsored by UNDP.

statisticians to make their accounts of socio-economic conditions more transparent and, thus, to lay the basis for accountability to be exercised.

303. Apart from these African initiatives, the international community, responding to a host of studies and reports on Africa's possible medium- and long-term prospects, has become alerted to the need to assist countries in the region in building up their national institutional capacities and in reintroducing a stronger long-term, developmental perspective into policy-making. Reference has earlier been made to one of such studies, the World Bank's LTPS. The World Bank, has launched, together with the African Development Bank and UNDP, the African Capacity Building Initiative (ACBI) which aims at strengthening local capacities in policy analysis and economic management in Sub-Saharan Africa. In addition, UNDP has responded to the erosion of development planning with a project entitled "For a Renewal of Development Planning in Africa" which is to be implemented in the second half of 1991 and includes a statistical "Minimum Programme". Data requirements include not only indicators to highlight the economic and social situation but should also allow to assess the state of human development. UNDP has also launched the National Long-term Perspective Studies (NLTPS) which are to look at the future of African countries over the next, say, quarter-century to an era after structural adjustment programmes. The NTLPS will, therefore, be a frame of reference for developing short-term, medium-term and long-term strategies for solving the economic and social problems of African countries. The recent initiatives to monitor progress towards the achievement of the social goals outlined in the World Summit Declaration on the Survival, Protection and Development of Children and the Plan of Action for implementing this in the 1990s, the Amsterdam Declaration on Population in the 21st Century, the Jomtiem Declaration on Education for all by the year 2000 and the Alma Ata Declaration on Health for All by the year 2000 have underlined the need for a large volume of social data at the national level sometimes at the subnational level. Coupled with an ever-increasing level of sophistication of planning procedures, all these initiatives will result in enormously expanded data requirements, both in quantity and quality. As it may be difficult if not impossible for some countries to be able to produce all the needed data for every one of these initiatives at the same time, the issue of priority setting and concentrating on a minimal (core) list of data requirements naturally arises. An approach to deal with the situation is outlined in the next section as is the issue of strengthening of statistical capacity in general also dealt with in subsequent section.

304. As concerns the strengthening of statistical systems, the following points were stressed at a EUROSTAT-World Bank workshop* concentrating on the situation in Sub-Saharan Africa: the promotion of effective demand for statistics; the establishment of national five-year statistical development plans and of frameworks for technical assistance, the latter to be drawn up by donors; the need for management training and thorough evaluation of past activities. Improvements were also needed in supervising and motivating staff and in project planning and implementation by allowing, for example, the anticipation and incorporation of a risk component. In addition, further attention will have to be paid to the institutional aspects of capacity-building, to data processing and to improved data analysis. The Workshop made a number of recommendations towards strengthening statistical systems. In the World Bank's LTPS Publication, some suggestions have also been made on how to strengthen information systems and basic statistics in Sub-saharan Africa.

305. Most of these recommendations have at one time or the other been made by African statisticians over the past decade. What all does not appear to have been put in place is an effective strategy for their implementation. In the following paragraph, a framework will thus be drawn up which spells out possible actions at the national, subregional and regional as well as global levels. Though the emphasis of the framework relates essentially to the National Statistical Services, the place and role of other data producers in the system e.g. line ministries, Central Banks, etc. is expected to be determined in any organizational set up which a country may opt for following the Needs Assessment exercise described in the next section. It is recognized however, that in most African countries the NSS remains the main if not the sole producer of official data.

National level

306. The analysis in Part I showed that African statistical services are at different stages of development. Therefore, any strategy for enhancing the capacities of such services will have to be country-specific. There are, however, general guidelines that can be formulated to assist countries in drawing up and implementing plans to enhance their statistical capacity.

6. NEEDS ASSESSMENT/PROGRAMME REVIEW AND STRATEGY DEVELOPMENT

307. The first step that has to be taken in each country is a needs assessment or a Programme Review and Strategy Development (PRSD) in order to find out what the current and future data needs of primary users of statistics are likely to be.

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* Inter-stat no. 3, September 1990-EUROSTAT-ODA-INSEE

308. The primary users include the Ministries of Planning and Finance and the sector Ministries, the Central Bank, academic and research institutions as well as the private sector. As already indicated some of these primary users could themselves be producers. The use to which statistical data has been put in the past and how the lack of data has constrained their work have to be ascertained. Needs assessments has to ensure that data demanded are actually going to be used and specific inquiries among users will, therefore, have to be carried out.

309. In following the procedure outlined above it will be possible for the assessment team to determine the priority that should be attached to any type of data. In the present economic situation of African countries not all data requirements can be automatically met by the NSS, and other producers in the system. The determination of priorities by an independent group is thus an essential step for making optimal use of the capacities of the service. Some of the criteria that the team should take into account in setting these priorities, which should include a minimum list of subjects, are policy relevance, requirements for efficient economic management and social development.

310. In order to allow priority needs to be met, the assessment team should also be mandated to determine the requirements of the statistical system (physical, human and fiscal). It should also make recommendations on restructuring the overall statistical organization, if necessary. If possible, there should be costing of these requirements and an indication as to where resources could come from.

Composition of Needs Assessment Team

311. As situations differ from country to country, no single model is being proposed here. In a number of countries there are enough local experts that can undertake such an assignment. In a second group of countries, there might be the need for only one or two international experts to join the team, while a third category of countries might require a team with a majority of its members being international experts. In any case, the team should consist of about five members and be chaired by an eminent personality who should be from the user side (an economist, economic geographer, sociologist, statistician or other social scientist) and able to approach the Minister responsible for statistics directly if the need arises. Apart from the chairman, other members of the team should be equally divided between statisticians and users and their specialization should cover all major fields of importance. The appointment of the team and determination of its terms of reference should be done at the highest possible level if its recommendations are to carry weight within the government, especially the Ministries of Planning and Finance. The suggested composition

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should be without prejudice to the possibility of institutional representation.

Organization of National Statistical System

312. Although the Needs Assessment Team's work ends with the presentation of its report, it is also expected to suggest better structures and legislation that must be put in place if the statistical system is to perform more efficiently. It has to examine whether a technical advisory committee or a statistical board or a statistical commission should be established to oversee the work of the statistical office and should define clearly the functions of such a body. Such functions should include approval of the work programme and budget, monitoring of outputs and user reactions, approval of senior level management appointments and providing policy guidelines.

313. The role of such a board is so crucial to the success of efforts to further develop statistical systems in Africa that care should be taken to select the best possible persons in each country for the assignment. Equally important is the determination of the relationship of the NSS with other producers.

7. PREPARATION OF STATISTICAL DEVELOPMENT PLANS

314. After its needs have been ascertained each country will have to draw up a 5-10 year statistical development plan. The plan should take into account all major Statistical production activities in the country and clearly state its objectives, problems to be addressed during the plan period and possible solutions. A section on the development of the human resources required to implement the plan will have to be included. If the government has prepared a 5-10 year development plan then the statistical plan will have to take it into account. If not the NSS will have to prepare its own plan independently which could later become an input into an overall development plan.

315. Before preparing a statistical development plan, the national statistical service will have to carry out extensive discussions with its primary users. The first draft of the plan will be circulated among these users for their written views and comments which will be taken into account in revising the draft Statistical Plan. This revision should be forwarded to the body overseeing the work of the statistical service. The NSS functions as the secretariat to the body.

316. Its review should be based on an appraisal of whether data in a useful form to meet the government's policy objectives and major users' needs are likely to be produced. In addition, the overall statistical supervisory body should also ensure that, as far as

possible, data would be generated for programme or project monitoring and evaluation.

317. The development of the human resources component of the plan has to be carefully thought out. Managing the most precious resource of the NSS is a challenge which will increase in the future as the private sector's offers to statisticians are likely to be ever more attractive. The demands to management for greater transparency in decision-making, especially concerning promotions, fellowships for external studies and involvement in externally funded projects will require that management training at middle- and senior-levels becomes routine. It is assumed that such training will significantly improve the quality of the actual day-to-day decision-making.

318. The management of the NSS should undertake greater efforts to increase the participation of women at all levels. It is recommended to set quotas so that qualified women will occupy, within a specified time frame, a certain percent of the posts at the respective levels. Such a quota system should also apply to opportunities to gain professional exposure and experience, such as in project teams, through fellowships for further studies and their participation in conferences and seminars.

319. Each NSS should have a training plan which translates the requirements of the statistical system into specific qualification profiles of staff for whom training is then called for. Such a demand-driven training scheme would avoid training being dictated by the availability of fellowships - a practice that has led to the current imbalance in trained personnel between economic and demographic statistics. It should also be noted that "on-the-job training" is probably most effective and should thus be prominently reflected in any plans for developing human resources.

8. DEVELOPMENT OF ANNUAL OR BIENNIAL WORK PROGRAMME BUDGETS

320 After the 5-10 year Statistical Development Plan has been approved, an annual or biennial work programme budget needs to be prepared. Although all African Governments operate a regime of annual budgets, it may be worthwhile to draw up a biennial budget which can later be decomposed into two annual work programme budgets. The preparation of a work programme budget is time-consuming and if this is to be done on an annual basis it may take too many work-months which the national statistical office can ill afford.

321. The preparation of a work programme budget entails the following basic steps:

a. Determining the number and type of programmes subprogrammes and programme elements that will be suitable for the presentation of the outputs of the statistical system.

b. Specification of final outputs

c. Indication of dates for the delivery of outputs

d. Resource requirements
   -National Government Budget
   -External Assistance.
   -Others

After the work programme budgets have been approved, the management of the NSS should prepare programme implementation plans.

9. DATA ANALYSIS

322. Each NSS should carry out as a minimum a preliminary or descriptive analysis of the data that it collects, similar to the first country reports of the WFS and DHS. The type of analysis plan being suggested for the SDA surveys should also be examined. The tools for such analysis are sufficiently described in standard statistical texts. For those countries that also publish an annual Economic (and Social) Survey, this activity should be continued. Efforts should be made to present up-to-date data in this survey and to publish it on time. While each statistical office should carry out some form of preliminary analysis of data, two ways are open to NSSs for in-depth analysis of data. The option which each statistical office should select will depend on the number, qualifications and experience of its professional staff. If it has limited or not highly qualified or inexperienced staff then in-depth analysis of its data will have to be carried out by an outside institution. This latter approach generally presupposes that the national statistical service can directly or indirectly fund such an analysis. If it has reasonable professional staff strength with the necessary qualifications and experience, then it can undertake the in-depth analysis in close collaboration with outside research institutions or individual researchers.

323. Such in-depth analysis has to be carefully planned. No single format can be proposed. For example, in some cases, it might be advisable to propose research themes arising out of the results of a survey. In another case, it might be preferable to look at the interrelationships of the different types of data collected. There should be discriminatory use of models and methodology of research to select only those which truly allow the understanding of the African situation and the various factors contributing to it.

324. In statistical offices which intend to carry out in-depth analysis, a special Research Unit or Department should be set up. Care should be taken to ensure that such staff are not diverted

from their primary function of analysis to assist in data collection as has sometimes happened. Staff should be changed periodically to ensure that new ideas and methodologies are introduced into the Unit from time to time. A possible approach is to work out an exchange arrangement with the country's university(ies) under leave with or without pay arrangements, to enable a regular exchange of staff between the Unit and appropriate University Departments.

325. For most African countries, however, the only feasible approach is for the statistical office to arrange with national, sub-regional and regional research institutions to carry out the in-depth analysis on their behalf. The terms under which such work should be carried out could be negotiated between the parties concerned. These will differ from country to country and no general guidelines can be provided.

Methods and standards

326. Methodological research can similarly be undertaken by the NSS alone or in collaboration with an appropriate national, subregional or regional research institute. Careful designing of such research is essential if waste of resources is to be avoided. Funding of this activity by donors will be necessary where the country cannot afford it. Mention has been made (para. 294-296) of possible types of methodological work that can be undertaken and the desirability of establishing Methods and Standards Division within the NSS as may be feasible.

10. DATA PROCESSING

327. Data processing equipment and techniques are being continuously updated. The NSS should keep abreast of developments and should evolve a data processing plan which includes estimates of present and future demand for specific resources such as hardware, software, disk space required, printing capability and communications links. Such forward planning is necessary irrespective of whether the NSS envisages the use of a mainframe, a miniframe, micro-computers or a combination, thereof.

328. The procurement policy of the NSS should take into account the type of application for which the equipment will be used, and whether hardware maintenance services are available locally. For large scale operations like censuses and surveys, it is sometimes recommended that a number of spare systems should be made available to rapidly replace malfunctioning systems.[10] The plan should also

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[10] United Nations Department of Technical Co-operation for Development and Statistical Office. The use of microcomputers for census data processing. Working Paper UNFPA/INT-88-P091/1. United

include arrangements for the training of subject-matter as well as computer specialists. Such a data processing plan should be an integral component of the statistical development plan already referred to in section 7.

11. DATA STORAGE, RETRIEVAL AND DISSEMINATION

329. The issues of data storage, retrieval and dissemination should be linked to both the use of which the data will be put and types of users. There should also be an examination of how data from different sources can be linked together. Countries are increasingly opting for micro-computer technology. With recent technological innovations such as the CD-ROM it is possible to store massive data on a diskette which can easily be disseminated. For example, further manipulation of census data sets can be effected if say, a sample of 0.1 per cent were stored on a $5^{1/4}$ inch diskette. With a few exceptions, the population of African countries are less than 30 million. The type of data collected in most African censuses can thus be adequately stored on two to three high density $3^{1/2}$ inch diskettes i.e. 3-4 MB. For Nigeria, which has an estimated population in excess of 100 million, a 0.1 per cent sample of census data could be stored on a fixed disk.[11] It is now possible to attach such disks to micro-computers either individually or in a local area network (LAN).

330. The proper storage of data is important to ensure data protection on the one hand and easy retrieval and utilization on the other. With increasing development of statistical data bases in the region, on-line access is on increasing demand. Hardware constraints may, however, persist for some time. In that case, some data like census or survey data may continue to be stored offline and be made available to frequent users on diskettes or similar media. Computer security will become an issue and NSS should develop policies and internal "codes-of-conduct."

331. Countries that have not yet developed data bases are urged to do so in consultation with primary users of the data, taking into account each country's level of technological development. Expert advice should be sought on such issues as appropriate hardware and suitable Data Base Management Systems which, together with other software packages, would enhance the use of the data base. It is important that the experts have a good grasp of the real life applications expected by statisticians and users. Other questions

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Nations, New York. 1989.

[11] United Nations. The Use of Micro computers for Census Data Processing. Working Paper UNFPA/INT-88P09/1. United Nations, New York, 1989.

relate to security and confidentiality of the data, communications links and a clear data dissemination policy. All such issues must be settled early in the process of developing a data base. Proper documentation, a Users' Guide, is essential to maximize the use of the data base. A clearing house function on criteria for software acquisition and an advisory role relating to data protection and communication limits could be assumed by regional bodies like UNECA, and possibly also using an expanded existing unit in the UN Statistical Office.

332. The NSS should, apart from preparing the Users' Guide or Manual, also set up effective mechanisms to ensure the effective use of the data. In particular, the Users' Guide or Manual should set out the background of and the objectives for the development of the data base. It should also outline its scope and the different subject files that are included. The Guide should also contain sections dealing not only with computer operating instructions but also system procedures and editing of the data. Procedures for retrieving, reviewing and updating data should also be covered. The Guides or Manuals should be truly user-friendly.

333. As soon as the data base becomes operational in any country a workshop should be convened involving all potential users of the data base so that they can be appraised of its working procedures. In the initial phase, frequent contacts between the Data Base management team and these users should be maintained so that there will be a feedback on problems encountered so that they can be corrected early.

334. It will also be useful to hold once a year a symposium during which producers and users of data will meet to discuss the uses to which the data have been put and to receive suggestions on types of data to be collected, on re-organization and on ways of enhancing the usefulness of the information provided by the data base.

12. PUBLIC AND USER AWARENESS FOR STATISTICS

335. As the ultimate purpose of statistics is to contribute to informed decision-making by the public and its representatives in Government, NSS should cast a more dynamic role for themselves in publicizing the results of their work and in creating a "statistical culture".

336. An important aspect is to instil an appreciation for the benefits which statistics can yield. It is, therefore, essential to include statistical themes in the curricula in primary and secondary schools. Statistics should not only be understood as a field of mathematics but also as an important tool for better understanding one's social and economic environment. Statistical techniques and their applications should thus be taught across social and human science subjects. Special efforts should be made

to encourage young women to cultivate interest in statistics so that the basis is laid for a greater number of them aspiring to tertiary-level education in this field than is the case now.

337. Interest for statistics among the general public can also be aroused by lively feature presentations on radio, in newspapers and magazines and on television; for example by highlighting social and economic characteristics emerging from a survey. It is important that media professionals are given the material to create attractive programmes.

338. The NSS itself can improve the appeal of its publications by using desk-top publishing and better printing techniques. Well-presented leaflets containing the most interesting information from a data collection exercise, with two or three summary tables and good graphics could go a long way in improving the public image of the NSS. African Statistics Day on 18 November of each year should be an occasion for a small media campaign, possibly an annual national poster competition in schools. User awareness particularly among policy and decision makers can be encouraged through seminars.

Training and research

339. In section 2 (paragraph 254 to 260) formal and informal training for both middle and professional staff was discussed. Elements of National training strategies should take cognizance of the points made in respect of inter alia

- orientation of basic institutional training programme towards application
- existence of guide syllabuses which need periodic review
- training of trainers

340. Equally important is training and retraining of junior cadre staff like statistical clerks, field staff (enumerators data entry staff etc). Existing general in-service training programmes in most countries should be strengthened, without prejudice to on the job skill improvement to handle specific programmes. Training and research activities have direct bearing on national level activities.

13. NEW DIRECTIONS FOR TECHNICAL CO-OPERATION

341. In order to move nearer achieving development objectives of technical co-operation programmes and projects in the statistics field donors and recipient countries have both been examining new approaches to maximize the impact of the use of technical co-operation resources to create durable statistical infrastructures in the region and generate meaningful statistical programmes. Some of the initiatives already include country execution of projects,

use of local experts and procurement of compatible equipment. A new challenge will have to be met as statistical aspects are increasingly incorporated into larger sectoral projects, the approval of which may not foresee the involvement of the Director of Statistics. Co-operation between multilateral and bilateral donors will hopefully be improved once UNDP's and National Technical Cooperation Assessment Programmes (NATCAPs) are being fully implemented.

342. National execution of projects which is already UNDP's policy will have to be encouraged and expanded during the 1990s with clear donor guidelines on accountability. The use of national experts should also be monitored to ensure that this does not cause discontent within the NSS, as some of the established staff may have qualifications and experience comparable to those of the national experts being recruited at higher salaries.

343. Again, this part does not recommend any particular approach but proposes that each country should select an approach which is in consonance with its own interests.

344. Co-ordination is the most controversial issue with respect to technical co-operation. Past experience has shown that failure to achieve effective co-ordination has led to unnecessary duplication, distortion of priorities within the NSS, staff discontent etc. The new direction therefore should have four main areas of co-ordination in mind.

345. First, there should be co-ordination of all statistical activities within the NSS. This can be achieved by regular meetings of Chiefs of sections, branches or divisions to discuss the work programme of the office, methodologies adopted for data collection and processing and progress regarding technical co-operation projects. This will avoid unfortunate instances of different units in the same statistical office using divergent definitions, concepts and classifications. A newsletter for internal circulation within the NSS could be considered.

346. The second type of co-ordination should involve all producers of statistical data within the country. It can be done within the context of the users-producers committees or separately depending on local conditions. This should hopefully result in avoiding unnecessary duplications and encouraging the harmonization of concepts, classifications and methodologies.

347. Thirdly, each country should have a local body to deal with co-ordination of technical co-operation in statistics in which both producers of statistics within the country and the donors meet periodically to discuss programmes, assess progress and propose remedial actions if necessary. African Governments should, in the future, also point to the data implications of international

projects or programmes proposed for implementation in their country such as, in the past, the United Nations Programme of Action for African Economic Recovery and Development 1986-1990. Such programmes often require substantial amounts of data needed for monitoring the implementation and impacts. This local body should be chaired by a senior representative of the Ministry responsible for technical co-operation in the country with the Director of Statistics acting as secretary. It should have a clearly defined agenda and supporting documents which should be circulated at least two weeks before the meeting. The results of this detailed discussion could then feed into the general technical co-operation consultations already held in countries among government and donors.

348. The fourth type of co-ordination will be at the level of donors in the country. In some countries, this machinery already exists, with the UNDP and World Bank representatives alternately chairing donors' periodic meetings. In countries where there is only a small number of donors (say not more than two) there may not be the need for the fourth level of co-ordination. The terms of reference of this committee of donors may differ from country to country. In the majority of countries, its activities may be limited to an exchange of information. In other countries, more effective collaborative arrangements among the donors can be worked out.

349. The monitoring of the implementation of the strategy at the national level will have to be an ongoing exercise from the start. Specific targets and deadlines should be set for fulfilling elements of the statistical development plan and of annual and biennual work programmes. Ultimately, the success criteria will be whether more and better data are produced and whether the use of such data has led to better decisions. Such a committee may not also be necessary if there already exists a committee at the regional level with similar functions.

350. Technical Co-operation Among Developing Countries (TCDC) has been in existence in Africa for some years now. Limited use has been made of this facility by a number of countries. Some examples are Zimbabwe's study tour to Botswana and Zambia on population censuses, Zambia to Kenya on census data processing, Cape Verde to Tunisia on analysis of household survey data and studies in Brazil by Portuguese-speaking African countries. In the 1990s increasing use of TCDC will have to be made especially by sending African statisticians not only to other countries of the region but also to institutions in India, Brazil and other appropriate third world countries. Such TCDC initiatives will have to be well planned to enable participants to gain maximum benefit out of them. Adequate funding will also have to be provided.

351. The *Institut national de la statistique et des études économiques* (INSEE) is also proposing the establishment of a Francophone African organization to be modelled on EUROSTAT. If this proposal is accepted, the new organization will have to be affiliated to financial institutions that can mobilize funds for the new organization. This new institution which will be staffed by both French and African experts will, if established, have implications for the development of African statistics in the 1990s.

352. Increasingly, statistical development projects are being incorporated into overall economic recovery programmes and NSSs should take advantage of this to have their needs addressed in such umbrella programmes.

Regional and sub-regional level

14. DEVELOPMENT OF CONCEPTS, DEFINITIONS AND CLASSIFICATIONS SUITED TO THE AFRICAN REGION

353. In the past, African statistical services have been criticized for adopting concepts and classifications prepared at the global level without assessing their applicability to conditions existing in their own countries. Although this general charge is not true of all countries in the region, there is evidence to support the view that not enough work had been done to adapt these concepts and classifications to suit African conditions.

354. Regional organisations like the UNECA and sub-regional institutions like the Economic Community of West African States (ECOWAS) and the Eastern and Southern African Preferential Trade Area (PTA) should play a leading role in adapting global concepts and classifications to suit conditions in the region or subregion. In this connection, regional and subregional expert group meetings should be held to discuss some of these issues and come out with well thought out recommendations. After these recommendations have been approved by the Joint Conference of African Planners, Statisticians and Demographers, workshops should be arranged to explain these modifications to practicing statisticians in the region/subregion. In certain cases, special manuals will have to be prepared for use at these workshops and by those who need to apply the adapted concepts and classifications in their work. Donors assistance in funding such expert group meetings and workshops will be needed.

15. STATISTICAL TRAINING AND RESEARCH

355. Within the framework of the implementation of this strategy there is need to strengthen the existing 16 (soon to be 17) regional and subregional institutions currently participating in the STPA. This can be done by ensuring the availability of

qualified staff for all the basic courses and specialist tutors for such important courses as agricultural statistics, labour statistics, health statistics, natural resource and environment statistics and sampling and survey organization. The number of micro-computers and corresponding software need to be increased in order to provide trainees at the centres with easy access to micro computers. Additional software is required, for example, for graph plotting and sampling error calculation. Visual aids equipment and material for teaching effectively are urgently needed.

356. STPA centres should be encouraged to venture into new fields, such as the teaching of concepts and methods underlying indicators for human development and sustainable development. This may involve greater attention to be paid also to the link between data production and analytical possibilities, including state-of-the-art presentation techniques (such as made by GIS software). Students should in general be encouraged to perceive their profession as one which requires them to anticipate data needs in a dynamic fashion.

357. Efforts should be made to expand twinning arrangements between STPA centres and some of the associate centres and other appropriate institutions abroad so that STPA can benefit from the exchange of lecturers and development of teaching materials. Some selected centres should be encouraged to run specialized postgraduate programmes that would produce statisticians in specialized fields such as agriculture, national accounts and survey design. In order to enhance analytical capabilities, STPA centres should get involved in the in-depth analysis of statistical data from countries. Such involvement would assist countries while at the same time providing practical training to their students.

358. For STPA centres to play their revitalised role of centres of excellence offering regional training services to African countries, it is clear that there will be need to mobilise adequate resources to support them. Donors are, therefore, requested to give assistance by providing block grants for trainees, physical equipment and postgraduate fellowships for trainees.

359. It is recognized that some of the more detailed specialist training in, say, national accounts, agriculture, labour, education and health cannot be done at all the STPA training centres. In close collaboration with FAO, ILO, UNESCO, WHO, UNICEF, and the UN Statistical office, the meeting of Directors of STPA Centres should select the centres for each specific type of training - one for English- and the other for French-speaking countries. In cases where specialized agencies have their own regional training centres, the meeting of Directors should decide whether there is need to duplicate the existing activities or merely to strengthen them. Some assistance will also have to be given to non-STPA centres, since they are also playing an important role in statistical training in Africa. The dialogue between STPA and

associate centres should be enhanced to make fuller use of their training and research capacity.

360. Exchange of teaching staff between STPA centres is one way of enriching the teaching programmes of these institutions. With one exception, centres for the training of English-speaking statisticians have arrangements for sabbatical leave. In the past, the sabbatical year has been spent in universities elsewhere. It would be appropriate to use the sabbatical year to teach in another centre. This possibility should be explored by the meeting of Directors of STPA Centres. For those centres not yet enjoying the sabbatical leave privileges it is recommended that the appropriate authorities be sensitised about the need for this facility. Donors assistance could go a long way in promoting such exchanges.

361. Apart from teaching, the statistical training centres should also undertake methodological research and offer junior-level management courses. There are a number of topics which deserve special study. Only a few are mentioned below for illustrative purposes:

- objective (crop-cutting) measures vs respondents' estimates in agricultural production
- coverage error evaluation in population censuses
- appropriate sample sizes for the conventional income, consumption and expenditure surveys carried out in Africa
- measurement of household income
- use of multi-phase sampling in population censuses
- sustainable GNP case studies
- GIS applications

362. For this purpose, when working out trainee/trainer ratios, for determining teaching staff strength, account should also be taken of research activities of staff. In certain cases, the research can be linked to project activities of students. In no case should research activities of the training centres be regarded as unimportant. Where such research capacities are weak, every effort should be made to obtain special funds for strengthening them.

16. ADVISORY SERVICES

363. Generally advisers either maintained by the UN and its specialized agencies or those provided by other multilaterals and bilaterals have performed well in the past. Their services will continue to be needed to provide short-term advisory missions, especially as long-term technical advisers in statistics are gradually being phased out. To provide integrated and well co-ordinated services to countries it is essential to keep teams of

advisers either located at one place or in different subregions. A regional advisory team should be composed as follows:[12]

1 Chief Technical Adviser (CTA)
2 Advisers on population census organization
2 Advisers on population census data processing
2 Advisers on census and survey cartography
2 Advisers on vital statistics and civil registration
4 Advisers on household surveys
2 Advisers on training
2 Advisers on data processing (other than population census data processing)
2 Advisers on statistical data bases
2 Advisers on economic statistics
2 Advisers on national accounts
1 Adviser on sampling
1 Adviser on environment statistics
2 Gender issues advisers

In addition, special consultants would be required for selected topics. A good proportion of the personnel should be women selected according to the same criteria as men. In the above list, it should also be noted that whenever 2 advisers are mentioned, one must be English-speaking while the other should be French-speaking. Bilingual candidates would be ideal but experience has shown that bilingual candidates with the necessary qualifications are difficult to recruit.

364. If, however, funds allowed for the sub-regional approach to be adopted, then each subregion should have at least one of each category of advisers listed above. The subregions that should be considered are West Africa, Central Africa and East and Southern Africa. Special provision will have to be made for North Africa which may not require the full list of experts.

365. If the subregional approach is adopted, the need for a small co-ordinating unit at a designated regional headquarters will arise. As the list of advisers implies, not one donor is expected to fund the whole regional team. The funding should be a joint effort by several donors and the whole programme should be conceived as an umbrella approach.

366. The main functions of the advisory team(s) is to advise individual countries on different aspects of statistical activity, especially in those areas where the country has encountered difficulties. Their advice should be based on the special

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[12] The list excludes advisers from the UN specialized as well as bilateral agencies. Eleven of the above advisory posts currently exist.

conditions existing in the country. They will be required to prepare detailed technical reports which will guide local experts in their work. Advisory missions will only be undertaken upon request and under normal circumstances at no cost to the country.

17. REGIONAL INFORMATION SYSTEM

367. The resolution adopting the Addis Ababa Plan of Action states under Principles and Objectives "UNECA should be recognized as the regional institution responsible for the development and promotion of statistics in Africa". In order to be able to achieve this objective, the already established statistical data base in UNECA will need to be improved to make it an authoritative source of statistical data on African countries. A host of other international agencies (e.g. FAO, WHO) have their own, often specialized data bases which cover or are solely dedicated to the African region. This requires not only the support of donors but, more importantly, the contribution of UNECA member States in providing high quality data on their countries.

368. Once African countries start providing high quality and timely data, these should form the basis for any regional data compilation and thus avoid the present confusion stemming from a multiplicity of different types of inconsistent data on Africa being published by bilateral and multilateral agencies.

369. A regional data base with links to national data bases will also make it possible for authorised users within countries to retrieve information not only from their own national data base but also from the regional data base. To facilitate this, there should be a Users' Manual for the Regional Statistical Data Base. Arrangements should be made to disseminate the products of the data base in convenient media for use in countries. Although telecommunications facilities have improved considerably in Africa during the past few years, there will still be need for such products as regional data on diskettes etc. UNDP and the World Bank have already taken an initiative to examine some of these issues.

18. PREPARATION OF GUIDELINES IN RESPECT OF NATIONAL STATISTICAL DEVELOPMENT PLANS

370. Most of the national statistical offices in the region will require general guidelines for the preparation of national statistical development plans. The UNECA should take the lead in preparing these guidelines which should contain, *inter alia*, notes on links between the statistical development plan and the overall national development plan, the past and current situation with respect to management, infrastructure and products of the statistical office, problems to be addressed during the five year period and scenarios for solving them.

371. The guidelines should also stress the need to relate such plans to resources likely to be available. The guidelines should be prepared as soon as the strategy document has been approved and be modified by a Working Group that is to be set up for this purpose.

19. PREPARATION AND ADAPTATION OF HANDBOOKS AND MANUALS

372. A large number of handbooks and manuals have been produced at the global level for use by statistical offices especially in developing countries. While some of these handbooks and manuals may not require adaptation before they are used in Africa, resources should be provided to allow, regional adaptation where necessary to be carried out by institutions or agencies best suited to do so.

373. In some cases, the appropriate handbooks and manuals may not even exist at the global level. There is, for example, no handbook on coverage and content error evaluation in censuses and surveys. If countries of the region require such handbooks and manuals, the appropriate institutions or agencies should be assisted to prepare them.

20. CO-ORDINATION OF TECHNICAL CO-OPERATION

374. In section 13, reference was made to the various co-ordination mechanisms that should be set up if technical co-operation is to have maximum impact. At the fourth level of the proposed mechanism was the meeting of donors at the country level. A regional Inter-Agency Committee to which the major donors should be invited should be instituted to meet as often as necessary with a carefully prepared agenda to discuss relevant issues including preparation of guidelines for:

(a) Needs Assessment missions,
(b) Statistical development plan,
(c) Work-programme budget, and
(d) Monitoring Statistical Capacity

The committee should also act as an informal Steering Committee to monitor the implementation of the strategy. UNECA and UNDP would jointly convene such Committee meetings. The first meeting should take place not long after the adoption of the strategy at a venue to be mutually agreed among participating agencies.

21. ROLE OF AFRICAN NON-GOVERNMENTAL ORGANIZATIONS (NGO'S)

375. NGOs like the African Statistical Association should in their work programmes propose areas in which they can assist African countries in enhancing their statistical capacity. Such areas include providing fora for the exchange of experiences,

methodological research, data application, technical assistance and ways to promote the involvement of women in statistical development.

Global level

22. UMBRELLA PROGRAMMES AND NETWORKING ARRANGEMENTS

376. Initiatives like ACP, AHSCP, NHSCP, in the 1970s and 80s served a useful purpose as umbrella programmes for promotion and execution of national projects. They have also facilitated, in the production of methodological studies and guidelines. particularly, through networking arrangements within the UN system. Such modalities of technical co-operation should also be considered for the 1990s. It may be possible to readapt the existing programmes to changing needs and requirements of the region. It will also be useful to consider more recent programmes like the SDA (the Statistical component) and others in any cooperation arrangements.

23. DEVELOPMENT OF GLOBAL STANDARDS, HANDBOOKS AND MANUALS

377. The UN Statistical Office, the statistical divisions of the specialized agencies and the IMF who are at present mandated to prepare global standards in specific fields should continue to do so. In preparing such standards, African experiences and problems should be taken into account. For this reason, adequate African representation in the groups that prepare these standards should be ensured.

378. UN Manuals and similar ones have proved very useful to African statisticians who have had access to them. It is, therefore, recommended that they continue to be produced to cover areas of interest especially to the developing world. In certain cases existing handbooks and manuals will have to be revised to take into account the current state of the art. Handbooks and manuals on data processing will now have to be updated more frequently and innovative approaches for doing so will have to be found. Statistical data bases are becoming increasingly important in developing countries and appropriate handbooks and manuals will have to be prepared.

24. PROVISION OF INTERREGIONAL ADVISORY SERVICES

379. In the past, interregional advisers from the UN and its specialized agencies have provided additional support for regional advisers in their work in countries. As these interregional advisers also deal with other regions they bring to their work a broad based experience in similar countries. They have thus contributed a great deal to improvements in data collection and processing. Areas in which they will be needed in the future include training, household surveys, population censuses, data

processing, sampling and special fields like agriculture, health, labour, education, nutritional status of children and mothers.

25. CO-ORDINATION OF TECHNICAL CO-OPERATION

380. Similar to the mechanism at the regional level, there should be a formal or informal machinery for co-ordination at the global level. The group will not discuss African issues *per se* but rather concentrate on global problems. However, as African issues form part of the global agenda it is expected that such co-ordination of technical co-operation at the global level will also benefit Africa. Reference has already been made to the ACC Sub-Committee on Statistical Activities and UN Statistics Commission as fora for such co-ordination. It may be necessary to strengthen donor participation in the latter and also involve international statistical organizations to a greater extent.

PART III:

IMPLEMENTATION OF STRATEGY

26. TRANSITIONAL ARRANGEMENTS

381. In order to ensure that as many countries as possible adopt the basic elements of the strategy outlined in Part II of this document, there is need for a smooth transition from the current state of statistical development in a country to the enhanced level that is being advocated in this strategy document. To that end, until the new strategy is implemented in any country, efforts should be made to continue the activities of the NSS at least at the current level. In particular, no existing machineries such as advisory boards or producers-users committees should be dismantled until plans are well advanced to put the new mechanisms in place. At the sub-regional and regional levels, similar actions will have to be taken.

382. Technical assistance programmes or projects already in the pipeline should not be disrupted but care should be taken not to commit the NSS to any long term activity before the report of needs assessment team, referred to in Part II, section 6 is approved. Before the medium-term statistical development plan is completed, the NSS in preparing its work programme should be guided by the general policies outlined in the needs assessment report. After the statistical development plan is prepared and approved, it should constitute the main guiding document for the NSS to prepare its work programme budgets.

27. ACTIONS TO BE TAKEN AT THE NATIONAL LEVEL

383. Head of the NSSs[13] should request the appropriate government minister to appoint a Needs Assessment Team under the leadership of an eminent personality with knowledge and experience of the uses to which statistical data are put. The NSS should act as the secretariat of the team. UNECA, UNDP, the World Bank and other donors should assist countries that have

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[13] Emphasis being placed on NSS presuposes a coordinating and leadership role for it vis-à-vis other producers such as line Ministries, Central Banks, etc. The exact role of the NSS within the National Statistical System will be determined by each country as mention earlier (para. 305)

difficulty in constituting Needs Assessment teams. Where desirable, other models of needs assessment can be tried.

384. The first draft of the report of the team should be ready within two months of its appointment and submitted for discussion by producers and users at a meeting convened solely for that purpose. The team may take into account the views expressed at the meeting and prepare the final draft document for submission to government. Copies of the final document should be sent to bilateral and multilateral agencies whose assistance may be required. In particular, UNECA and UNDP should receive copies at an early date.

385. The government will examine the report and indicate which recommendations it is prepared to accept. It will then proceed to constitute an appropriate overseeing body e.g. a Statistical Board or Commission or Technical Advisory Committee which will *inter alia* supervise the implementation of the accepted recommendations.

386. The NSS will have the responsibility of preparing the medium-term (5-10 years) statistical development plan, the draft of which should be ready within 4 months after receiving instructions from its supervisory body. The draft should be discussed with producers and users at a formal meeting and revised on the basis of comments received at that meeting. The revised draft should be submitted to government for approval. While awaiting approval, the NSS should start work on the work programme budget so that as soon as the statistical development plan is approved, it will be in a position to submit the work programme budget to the Ministry of Finance, in accordance with any rules and regulations that may be in force in the country at that time.

387. Monitoring progress towards the achievement of the goals of the strategy will have to be entrusted to the Statistical Board/Commission/Technical Advisory Committee. It will be part of the function to clear obstacles to the implementation of the strategy. It will be the responsibility of the head of the NSS to contact UNDP through the appropriate Government authority to initiate action on the setting up of the Donors Committee/Task Force on statistics. Other co-ordination mechanisms within the NSS and among producers or producers and users will be set up by the NSS in the initial phase of the implementation of the strategy.

388. Other mechanisms that the needs assessment team may propose should be set up as soon as possible at national level. In particular, mechanisms on co-ordination should be in place at an early stage of the implementation of the strategy.

28. ACTIONS TO BE TAKEN BY SUB-REGIONAL AND REGIONAL BODIES

389. The success of any steps to implement the strategy outlined in Part II of this report will depend to some extent on the support provided to national bodies by regional and sub-regional institutions like UNECA, the ADB, Economic Community of West African States (ECOWAS), East and Central African Preferential Trade Area (PTA), Economic Community for Central African States (ECCAS) and Southern African Development Co-ordination Conference (SADCC). They should provide financial and or technical support to their respective member countries since any improvement in scope, quality and timeliness of statistical information will have beneficial effects on their work. AFSA should be kept informed of developments and encouraged to participate in the implementation of the strategy.

390. As already stated in Part II, UNECA will have to convene a meeting of the Inter-Agency Group in which most of the principal international actors in the plan to assist African statistical development should be represented. This will include UNECA, UN Statistical Office, UNDP, ADB, World Bank, UNFPA, UNICEF, FAO, ILO, UNESCO, WHO, and a number of interested donors. UNECA should convene the first meeting of this group soon after the adoption of the strategy document so that the assistance that individual organisations within the group can give to the process of statistical development in the region can be ascertained. In this regard, it should be noted that assisting in African statistical development is an enormous task and that each agency has a role to play in this effort. The Committee will have to consider the desirability of formally launching the strategy to a wider public.

391. The first meeting of the Inter-Agency Committee should examine draft terms of reference and modalities for the Needs Assessment teams and draft guidelines for the preparation of their report. These drafts should be prepared by UNECA for discussion by the Inter-Agency Committee before being circulated to member states for their guidance.

392. The Inter-Agency Committee should also review periodically progress made by individual countries in assessing their statistical needs. Experience in Africa suggests that probably not more than ten countries will initiate action on appointing their Needs Assessment teams without outside assistance. Initially, support should be mainly concentrated on countries that assess their statistical needs in accordance with the guidelines approved by the Inter-Agency Committee. There should be a concerted effort by all concerned to enhance statistical capacity in the initial list of countries so that those that have not taken action can be encouraged by the progress achieved. After the experience with the initial phase, additional countries can then be included.

393. The Committee will have the responsibility for monitoring the implementation of the strategy.

394. UNECA should inform all NSSs of the clearing house arrangements set up at the regional level for the procurement of software. It should also include software information in its Newsletters.

395. UNECA and UNDP should jointly investigate the possibility of implementing the strategy under an umbrella programme and discuss the issue at the first meeting of the Inter-agency Committee.

29. ACTIONS TO BE TAKEN AT THE GLOBAL LEVEL BY BILATERAL, MULTILATERAL AND OTHER ORGANIZATIONS.

396. In the preceding section, the actions by regional bodies like UNECA which also involve multilateral, bilateral and other organizations have already been outlined. At the global level, there is need to report periodically on developments to the UN Statistical Commission and to some extent also to the UN Population Commission. As stated in the **Addis Ababa Plan of Action for Statistical Development in Africa in the 1990s** the United Nations ACC Sub-Committee on Statistical Activities should be used more effectively as a vehicle to improve co-ordination among international agencies. Specifically, at the first meeting of this ACC Sub-Committee after the Working Group has endorsed the strategy paper, UNECA should introduce an agenda item to discuss follow-up actions by the various agencies, including the World Bank.

397. UNDP should take the initiative to discuss with donors the question of mobilizing additional resources for statistical activities in Africa. Objections against establishing a special fund in the past were based on the argument that such assistance should come from the overall programmes that countries negotiate with donors. However, in view of past experiences and the difficult economic situation in many African countries, it is time to reconsider the issue, as one possible way of generating the additional resources.

398. At the global level, the cooperation of bilateral and multilateral agencies will be necessary to ensure that technical assistance programmes do not disrupt country's work programme and are in line with National priorities.

30. CONCLUSIONS

399. The state of African Statistics has to be redressed with great urgency. If it is allowed to further deteriorate, it will seriously hamper attempts to revive African economies since relevant, reliable and timely data will not be available. The efforts to enhance statistical capacity in the region should be in step with similar efforts to revitalize the planning process and to build institutional capacities in the public and private sector. Statistical development cannot take place in isolation and has thus

to be linked with overall improvement in public sector services and the general state of the economy.

400. With this in mind, African countries have to attach greater importance to their economic recovery programmes and bear in mind the relevance of statistics to any such effort. They have, thus, to devote a reasonable proportion of their own resources and the external aid they receive to the enhancement of statistical capacity.

401. Bilateral and multilateral agencies should assist in the spirit of collaboration and co-ordination of efforts by safeguarding against statistical programmes or projects whose main aim is to benefit donors or researchers in developed countries. If all parties combine to help and the African countries themselves take bold and imaginative steps to revitalise their statistical systems, then hopefully a way forward is possible.

ANNEX

ADDIS ABABA PLAN OF ACTION FOR STATISTICAL DEVELOPMENT IN AFRICA IN THE 1990S

PREAMBLE

The ECA Conference of Ministers,

__Reviewing__ the development of statistics in Africa over the last thirty (30) years,

__Reviewing__ the current statistical capacities in African countries,

__Reviewing__ major factors determining success or failure of the performance of national statistical services,

__Stressing__ the strategic role of quantitative analysis for improving decision-making for sustainable development,

__Mindful__ that data demands to formulate, monitor and evaluate policy reforms and development plans are increasing,

__Noting__ with great concern the continuing low profile accorded to national statistical services and deteriorating conditions of service,

__Concerned__ about a lack of consideration of national plans and priorities as well as some duplication in internationally sponsored statistical development programmes,

__Recognizing__ the collective commitment of African Planners, Statisticians and Demographers to accelerate self-reliant, social and economic development for the well-being of African peoples,

__Adopts__ the following Plan of Action for Statistical Development in Africa in the 1990s.

PRINCIPLES AND OBJECTIVES

PRINCIPLES

1. Statistics is a vital tool in national development planning.
2. African statistical services need to become fully self-reliant.
3. Statistical programmes should respond to African Governments' commitment to self-reliant development.

4. International co-operation and support in the field of statistics should respond to priorities and programmes of National Statistical Services (NSS).

5. Adequate and reliable statistics are a pre-requisite for designing, monitoring and evaluating projects.

6. Increased communication at all times between users and producers of statistics is an important resource in itself which, once started, would generate additional resources through the attractiveness of its product.

7. Any improvement of statistical system constitutes an integral part of economic and social development.

8. ECA should be recognized as the regional institution responsible for the development and promotion of statistics in Africa.

OBJECTIVES

1. To achieve national self-sufficiency in statistical production, including the creation of a comprehensive national statistical data base by the end of the century.

2. To improve the reliability and relevance of data produced in African countries.

3. To undertake production of data required for formulating, monitoring and evaluating programmes designed to restructure and transform African economies.

4. To improve the timeliness in the production and dissemination of statistical information.

5. To increase awareness of the importance of statistical information among users.

6. To strengthen and sustain statistical training programmes at various levels and institutions.

7. To promote contact and dialogue amongst African Statisticians.

8. To encourage improvement in the organizational set-up of the NSS and assure their autonomy.

9. To improve co-ordination of all statistical development programmes at both national and international levels.

RECOMMENDATIONS

A. TO GOVERNMENTS-MEMBER STATES OF ECA

Statistical Development

1. A higher priority should be accorded to statistical activities and statistics should be seen as central to the formulation of plans and strategies.

2. Adequate funding should be provided for statistical activities.

3. Assistance should be provided in the establishment of a Statistical Development Fund with contributions from the public as well as the private sector.

4. Governments should ensure that the legislation governing the statistical services in their countries assures their utmost effectiveness.

5. ECOWAS's 18th of November should be adopted as African Statistics Day in order to increase public awareness for the important role which statistics play in all aspects of social and economic life.

6. African governments are urged to continue to give support to the African Statistical Association (AFSA)

Organization of Statistical Services

7. The organizational structure of the NSS should be examined carefully and, where necessary, restructured in order to meet the various data needs.

8. In order to attract and retain suitable manpower Governments are urged to develop attractive schemes of service for statisticians.

Work programme

9. The NSS should prepare longer term statistical development programmes (e.g. 5 or 10 years) in the context of National Development Plans. Such programmes should serve as a guide and framework for annual or biennial national statistical work programmes.

10. A budget document showing details of inputs and final outputs to be delivered by the NSS should be prepared for each financial year.

Statistical Committees

11. Countries are requested to set up National Statistical Councils composed of senior civil servants, representatives of universities, NGOs and the private sector. Such a Council should act as an advisory board on policy matters relating to statistical matters.

12. User/producer and producer/producer committees should be reactivated in countries where they exist or should be initiated in countries where they do not exist. These committees enable exchange of views regarding development of statistics, uses of available statistics and the setting up of priorities for the country's statistical activities.

Establishment of Statistical Priorities

13. In accordance with the Lagos Plan of Action and the Final Act of Lagos, NSS should consider the following as priority areas in future statistical programmes: food and agriculture, industry, human resources, transport and communications, trade and finance, environment, energy, women and development, population and development and the informal sector.

Statistical Training

14. NSS and statistical training institutions at the national level should organize specialized short-term training courses in statistics.

15. NSS are urged to prepare and implement staff development programmes which would help them to fully utilize available training facilities.

16. The linkage of NSS with statistical and other training institutions should be encouraged, where absent, and strengthened, where it exists.

17. All governments should give support to centres participating in the Statistical Training Programme for Africa (STPA).

Seminar

18. National seminars covering specific or broad areas with participation of civil service as well as research and training institutions should be organized on a regular basis and should be included in the programme of work.

Data Quality and Dissemination

19. In order to improve the quality of information collected, NSS are requested to consider setting up in their offices an organizational unit on methods and standards.

20. NSS are urged to ensure that data are published with minimum delay.

21. As research is a vital element in statistical development, NSS are encouraged to include research as an integral part of their statistical activities.

B. TO INTERNATIONAL ORGANIZATIONS

22. UNDP and other multi-lateral and bilateral agencies are urged to enhance the scope and implementation of the ongoing Statistical Development Programme for Africa (SDPA) and other programmes.

23. More effective use should be made of the ECA Joint Conference of African Planners, Statisticians and Demographers, the United Nations ACC Sub-Committee on Statistical Activities and the Statistical Commission as institutional arrangements to improve co-ordination among international agencies.

24. ECA should take the initiative to convene a working group meeting to further review and elaborate on the principles, objectives and recommendations of the Plan of Action and formulate detailed strategies for its implementation.